County Borough of Blackburn.

ANNUAL REPORT

UPON THE

Health of Blackburn,

FOR

THE YEAR 1894,

BY

JAMES WHEATLEY, M.D.,

Medical Officer of Health, Police Surgeon, and Medical Superintendent of Fever and Small Pox Hospitals.

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Printed by J. and G, Toulmin, 1895. Corporation Street.

With Medical Officer of Health's Compliments.

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MEMBERS OF THE HEALTH COMMITTEE.

THE MAYOR.

MR. ALDERMAN BILLINGTON (CHAIRMAN),

" COUNCILLOR LAW
Appointed Chairman, Jan. 14th, 1895

" COUNCILLOR RUSHTON (VICE-CHAIRMAN),

" COUNCILLOR NUTTALL
Vice-Chairman from Nov. 17th, 1894 to Jan 14th, 1895.

" COUNC. J. S. WATSON
Appointed Vice-Chairman January 14th, 1895.

" ALDERMAN JAS. DIXON

" ALDERMAN NEWTON

" COUNCILLOR BRAMWELL

" " BURY

" " CRAWFORD

MR. COUNCILLOR R. DIXON

" " DODGSON

" " FARNWORTH

" " GARSDEN

" " GREEN

" " HAMER

" " HIGSON

" " LEEMING

" " MITCHELL

" " ODDIE

" " PARKINSON

" " POLLARD

" " RILEY

" " J. SHARPLES

" " SUTCLIFFE

" " SIMM

" " TATTERSALL

" " WHITELEY

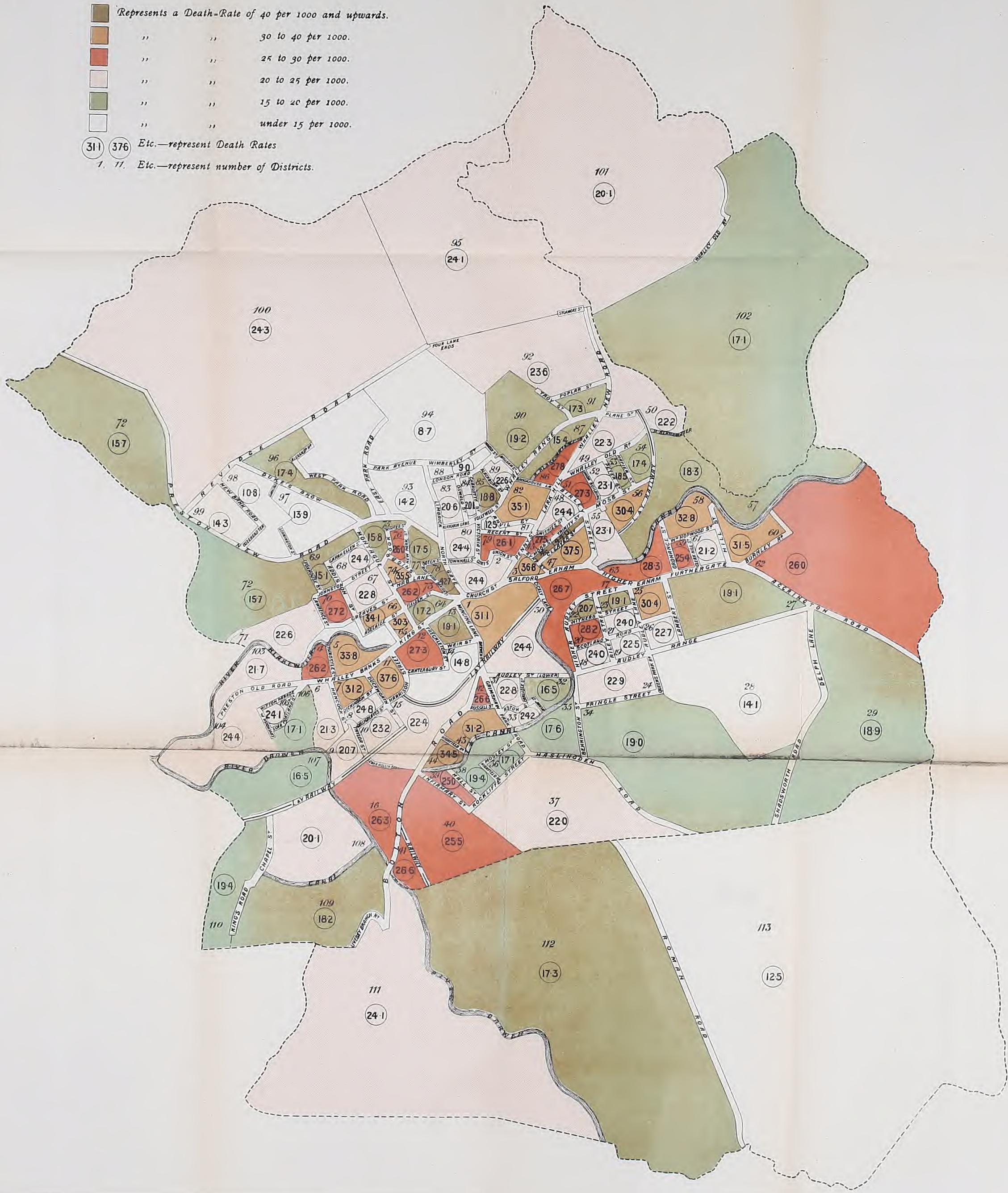
INDEX.

COUNTY BOROUGH OF BLACKBURN.

Divided into Enumeration Districts and shewing the Average Death-Rate in each District for six years, 1889—1894.

Represents a Death-Rate of 40 per 1000 and upwards.
,, ,, 30 to 40 per 1000.
,, ,, 25 to 30 per 1000.
,, ,, 20 to 25 per 1000.
,, ,, 15 to 20 per 1000.
,, ,, under 15 per 1000.

(31·1) (37·6) *Etc.—represent Death Rates*
1. 11. Etc.—represent number of Districts.



W. Brown, Litho., Preston.

Public Health Office,

Blackburn,

May 24th, 1895.

To the Chairman and Members of the Health Committee of the County Borough of Blackburn.

Gentlemen,

I have the honour to submit to you, in accordance with the regulations of the Local Government Board, my Annual Report for the year 1894. It comprises the birth and death statistics, the measures adopted for the prevention of disease, and the work done by this department.

I am, Gentlemen,

Your Obedient Servant,

JAMES WHEATLEY.

VITAL STATISTICS.

Population.—The population based upon the 1891 census, and calculated to the middle of 1894, is 125,797.

TABLE I.

Population at the age periods at the 1881 and 1891 census, and estimated to the middle of 1894.

Age Periods.	1881 Census.	1891 Census.	Estimated to the middle of 1894.
Under 5	14,610	15,017	15,151
5 to 15	23,284	27,753	29,303
15 to 25	21,150	23,621	24,484
25 to 35	16,229	19,739	20,936
35 to 45	12,134	14,299	15,045
45 to 55	8,614	10,076	10,740
55 to 65	5,176	6,038	6,348
65 to 75	2,171	2,830	3,084
75 and upwards	646	691	706
TOTAL	104,014	120,064	125,797

The estimated increase of population since 1891 is 5733. This is calculated at the same rate of increase as obtained during the intercensal period 1881—1891. Since 1891 there have been about 1065 houses built. If 4½ persons be counted for every house, there would have been an increase of 4792, and the popution for 1894, would be 124,856. I am of opinion that this is the more correct estimate.

TABLE II.

Births, Deaths, and Natural Increase of Population for 14 years, 1881-1894.

Year.	Births.	Deaths.	Natural Increase.
1881	3,919	2,431	1,482
1882	3,918	2,665	1,253
1883	4,305	2,660	1,645
1834	4,132	2,663	1,469
1885	4,000	2,452	1,549
1886	4,004	2,863	1,141
1887	4,164	2,974	1,190
1888	4,111	2,865	1,246
1889	4,150	3,077	1,073
1890	4,015	2,882	1,133
1891	4,085	3,116	969
1892	3,883	2,551	1,332
1893	3,822	2,793	1,029
1894	3,621	2,173	1,448
TOTAL.....	56,130	38,165	17,965

On the following pages are given all the facts pertaining to Blackburn, contained in 1891 census.

Populations of Males and Females at the different Age-Periods.

Sanitary District.	All Ages. Persons.	All Ages. Males and Females	Under 1 Year.	1	2	3	4	Under 5 Years	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100 and upwards.
BLACKBURN (Urban).	120064	M. 56114	1568	1483	1466	1371	1408	7296	7135	6623	5715	4965	4673	4301	3684	3017	2411	2080	1505	1195	764	465	186	78	15	5	1	—
		F. 63950	1749	1499	1551	1483	1439	7721	7130	6865	6664	6272	5744	5021	4179	3419	3039	2546	1865	1473	996	605	273	101	25	7	—	—

Birth Place of Males and Females.

WHERE BORN.	MALES.	FEMALES
CHESHIRE	443	558
LANCASHIRE	49,891	55,555
LONDON	203	252
OTHER PARTS OF ENGLAND	3623	5011
SCOTLAND	406	500
IRELAND	1321	1801
ISLANDS IN THE BRITISH SEAS	18	40
BRITISH COLONIES, &c.	75	99
FOREIGN COUNTRIES	124	126
AT SEA	10	8
TOTAL	56,114	63,950

Country of Birth of Foreigners.

WHERE BORN.	MALES	FEMALES
RUSSIA	5	1
POLAND (Russian)	4	1
SWEDEN	—	1
NORWAY	—	1
DENMARK	2	—
HOLLAND	—	4
BELGIUM	1	1
FRANCE	2	5
GERMANY (including Heligoland)	14	7
AUSTRIA	1	—
PORTUGAL	1	—
ITALY	9	3
TURKEY	1	1
CHINA	—	1
AFRICA	1	—
UNITED STATES	38	34
MEXICO	—	1
OTHER STATES OF AMERICA	7	13
TOTAL	86	74

TABLE FROM 1891 CENSUS.

Urban Sanitary District.		All Ages.	Under 15 Years	15	20	25	35	45	55	65 and up.
BLACKBURN.										
Unmarried	M.	33944	21054	5689	3558	2257	732	364	179	111
	F.	38463	21716	6561	4415	3524	1200	594	316	137
Married ...	M.	20279	...	24	1388	6564	5716	3786	2023	778
	F.	20848	...	102	1848	7009	5728	3836	1755	570
Widowed...	M.	1891	...	2	19	153	253	341	498	625
	F.	4639	...	1	14	232	670	1155	1267	1300

Total Tenements and Tenements with less than Five rooms, distinguishing those occupied by various numbers of people.

	Rooms in Tenement	Number of tenements with less than five rooms	Number of Occupants of Tenements.											
			1	2	3	4	5	6	7	8	9	10	11	12 or more
BLACKBURN. Total Tenements 24,682.	1	85	17	32	17	7	3	4	3	1	...	1	...	...
	2	592	94	178	116	81	49	41	16	11	5	...	...	1
	3	404	44	105	78	59	33	36	20	18	6	2	3	...
	4	14712	354	2307	2688	2688	2207	1689	1224	810	433	214	64	34

Borough and Wards Houses and Population.

Borough and Wards.	Houses.			Population.		
	Inhabited.	Uninhabited	Building.	Persons.	Males.	Females.
Park.....	6161	398	71	31515	14792	16723
St. John's	4734	469	56	22369	10203	12166
St. Mark's	2863	265	30	13736	6391	7345
St. Mary's	437	264	...	2320	1114	1206
St. Paul's.....	3284	406	8	16184	7628	8556
St. Peter's	2688	285	9	13070	6133	6937
Trinity.....	4304	349	7	20870	9853	11017
Borough	24471	2436	244	120064	56114	63950

TABLES FROM 1891 CENSUS.

Occupations of Males and Females aged 10 and upwards.

Occupation.	Male	F'm'le
1. Professional Class.		
Civil Servants, Local & General	337	18
Clerical Profession	130	6
Legal Profession	136	...
Medical and Dental	60	...
Veterinary	3	...
Nurses &c.	34	91
Teachers and School Officers...	166	389
Students (over 15 years) ...	92	99
Literary and Scientific... ...	26	...
Engineers and Surveyors ...	24	...
Artists, Photographers, Musicians, &c.	218	53
2. Domestic Class	161	3007
3. Commercial Class.		
Merchants, Agents, Bankers ...	221	7
Commercial Travellers	196	...
Commercial Clerks	708	23
Insurance	316	2
Railway Employees	596	1
Coachmen, Carters, Carriers, &c.	1253	2
Bargemen &c.	122	14
Messengers, Porters, Watchmen, &c.	374	19
4. Agricultural Class	500	30
5. Industrial Class.		
Printers, Bookbinders, Lithographers, &c.	308	23
Machine Makers, Tool Makers, Fitters, &c.	1220	9
Other Instrument Makers ...	128	6
House Building Trades	2487	2
Furniture Makers and Dealers	364	22
House Decorators	54	4
Carriage and Cycle Makers and Dealers	134	...
Saddlers	41	...
Shipwrights and Builders ...	11	...
Chemicals &c.	8	...

Occupation.	Male	F'm'le
Industrial Class (contd.).		
Tobacconists	37	26
Hotel Keepers, Publicans, &c.	280	165
Wine, Spirit, and Beer Sellers	164	61
Brewers and Malsters	164	1
Milksellers, Dairymen	5	...
Butchers, Meat Salesmen ...	322	34
Provision, Curer, Dealer ...	128	18
Fishmongers and Poulterers...	162	19
Corn Merchants, Millers, &c....	143	2
Bakers, Confectioners	288	332
Grocers	779	336
Other Purveyors of Food ...	162	72
Wool and Worsted	12	7
Silk	4	1
Cotton and Flax	16032	23411
Hemp and other Fibrous Materials	78	...
Mixed or Unspecified Materials	315	229
Tailors, Hatters, Milliners, Dressmakers	480	1324
Boot, Shoe, and Clog Makers...	531	23
Others Working and Dealing in Clothes	180	229
Timber, Wood, and Cork Merchants and Dealers	272	...
Paper Makers, &c.	199	89
Coal Miners	259	...
MISCELLANEOUS.		
Chemists, Druggists, &c.... ...	131	5
General Shopkeepers	78	59
Pawnbrokers	54	5
Labourers (various)	1871	...
Coal Workers and Dealers ...	331	3
Ironmongers, Iron and Steel Dealers, &c.	1658	7
Stone Dealers, Quarriers, &c....	393	1
Other Industrial Occupations .	1381	222
6. Unoccupied Class.		
Retired from Business	773	386
Pensioners	26	...
Living on own means	328	955
Others over ten years	3230	17248

BIRTHS.

During the year there have been 3,621 births registered, compared with 3,822 in 1893, or a decrease of 201.

Of these births, 1805 were males and 1816 were females.

161 or 4·4 per cent. of the births were illegitimate.

Further particulars of the birth rate are set forth in tables.

TABLE III.

Total number of births during the four quarters for 1891, 1892, 1893 and 1894.

Year.	1st Quarter	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
1891	952	1090	1084	959	4085
1892	948	901	1082	952	3883
1893	959	1041	867	955	3822
1894	964	894	824	939	3621

This decrease in the birth-rate has now been continuous since 1883. It must necessarily have had some influence on the age distribution of the population and consequently on the death-rates. It is of course evident that a decreasing birth-rate will, for some years, cause lower death-rates. In Blackburn, a uniformly decreasing birth-rate would continue to lower the death-rate for about 45 years.* If the birth-rate were lowered and remained fixed at this lower level, it would only continue to reduce the death-rate for 20-25 years. After this time for many years the effect would be to raise the death-rate.

*This is calculated on the death rates at various ages for 1892.

Based on the 1891 census there have been worked out factors of correction for the death-rates.

These are calculated upon the age distribution of the population and consequently rectify any disturbing influences due to such age distribution. These factors are given on Table IX. But in comparing one of series of years with another one must bear in mind that for many years a decreasing birth-rate naturally tends towards a decreasing death-rate.

Vaccination.—There seems to be a tendency notwithstanding all efforts for the number of unvaccinated children to increase.

TABLE IV.

VACCINATION.

Year.	Successfully Vaccinated.	Died Unvaccinated.	Insusceptable.	Postponed.	Unaccounted for.
1889	3400	455	7	64	184
1890	3220	404	6	91	187
1891	2852	522	7	131	412
1892	2869	492	13	50	297
1893	2674	560	23	94	471
1894	2589	340	21	96	575

Deaths.—During the year there have been 2,245 deaths registered ; being 620 less than in 1893.

According to the usual custom the deaths at the Workhouse and Infirmary belonging to out districts have been deducted in calculating the death rate. The number deducted was 72, and the correct death rate is 17·2. Without deduction the death rate would be 17·8.

It will be seen from the accompanying table that this is by far the lowest death rate that has ever obtained in Blackburn. It is 17 per cent. less than any previous death rate. There are, no doubt, many causes which have co-operated in bringing about this great reduction. The absence of any epidemic of consequence, the mildness of the summer, and the decreasing birth rate are no doubt all factors in the production of this low death rate. The occurrence of epidemics of whooping cough and measles in the present state of sanitary administration are certainly, to a very great extent, a matter of chance. Still, such a low death rate is a matter for congratulation.

TABLE V.

Year	Population at Census Years.	Population estimated to middle of year.	Death Rate.	Average death rate in 10 year periods.	Year	Population at Census Years.	Population estimated to middle of year.	Death Rate.	Average Death Rate in 10 year periods.
1841	36,629	36,849	25·9		1871	76,339	76,695	26·5	
1842	...	37,742	25·0		1872		78,136	26·2	
1843	...	38,656	31·5		1873		79,604	30·9	
1844	...	39,593	28·8		1874		81,099	29·9	
1845	...	40,552	27·7		1875		82,624	26·6	
1846	...	41,534	35·7	29·02	1876		84,175	28·9	27·38
1847	...	42,541	33·9		1877		85,756	24·8	
1848	...	43,571	27·8		1878*		95,357	30·6	
1849	...	44,627	25·2		1879		97,223	24·2	
1850	...	45,708	28·7		1880		102529	25·2	
1851	46,536	46,892	27·0		1881	104014	104388	22·4	
1852	...	48,344	35·1		1882		105897	24·3	
1853	...	49,841	35·2		1883		107427	23·9	
1854	...	51,384	25·6		1884		108980	23·6	
1855	...	52,974	33·6		1885		110555	21·3	
1856	...	54,614	24·3	29·47	1886		112153	24·7	23·83
1857	...	56,306	32·2		1887		113774	25·3	
1858	...	58,049	31·8		1888		115418	24·0	
1859	...	59,846	25·8		1889		117086	25·4	
1860	...	61,699	24·1		1890		118780	23·4	
1861	63,126	63,434	27·9		1891	120064	120496	24·9	
1862	...	64,681	28·1		1892		122240	20·8	21·3
1863	...	65,953	21·8		1893		124006	22·5	
1864	...	67,249	25·9		1894		125787	17·2	
1865	...	68,572	27·4						
1866	..	69,920	30·7	27·83					
1867	...	71,294	27·5						
1868	...	72,696	26·9						
1869	...	74,125	31·5						
1870	...	75,583	30·6						

* Part of Witton and Livesey added.

TABLE VI.

Causes of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Measles	3	2	1	1	1	1	1	1	1	...	...	1	13
Diphtheria	...	1	1	1	1	...	1	...	1	1	5	2	14
Scarlet Fever	..	...	1	...	1	1	2	2	1	1	...	1	10
Whooping Cough	1	1	5	5	3	3	1	1	4	7	6	6	43
Typhoid Fever ...	3	1	2	2	2	4	3	4	5	1	4	1	32
Influenza	1	4	1	2	4	...	2	1	...	...	2	3	20
Diarrhœa	2	3	2	5	3	4	15	15	11	15	7	6	88
Phthisis	17	16	9	17	18	8	11	13	6	9	10	14	148
Heart Disease ...	15	14	12	12	6	16	9	9	6	13	6	12	130
Croup.....	4	1	...	3	...	1	1	4	2	3	...	1	20
Pneumonia and Pleurisy	23	16	24	25	15	15	14	16	13	28	24	26	239
Bronchitis	32	12	27	17	12	13	19	12	13	31	34	23	245
Other Diseases ...	114	102	103	90	120	74	114	72	89	124	84	85	1171
Total	215	173	188	180	186	140	193	150	152	233	182	181	2173

TABLE VII.

WARDS.	Population.	Deaths	Births.	Death Rate.	Birth Rate.	Deaths under one year per 1000 Births.	Death rate from six Zymotic Diseases.	Death rate from Diarrhœa.	Death rate from Bronchitis and Pneumonia.	Death rate from Phthisis.
ST. MARY'S ...	2089	55	36	26·3	17·2	250	...	0·4	4·3	1·9
ST. PAUL'S.....	15848	299	443	18·8	27·9	180	0·7	0·8	4·3	1·3
ST. JOHN'S ...	24739	357	629	14·4	25·4	128	0·8	0·6	2·7	0·9
TRINITY.....	21648	423	664	19·5	30·2	192	0·7	1·3	4·3	1·4
PARK	33156	591	1070	17·8	32·2	143	1·2	0·4	4·6	1·2
ST. PETER'S ...	13395	236	417	17·6	30·3	177	0·6	0·6	3·6	1·0
ST. MARK'S ...	14922	212	362	14·2	24·2	209	1·0	0.4	2·4	0·8
BOROUGH	125797	2173	3621	17·2	28·7	168	0·9	0.7	3·8	1·1

The deaths occuring in the Workhouse and Infirmary have been referred to the Districts to which they belonged before being admitted to these Institutions.

TABLE VIII.

Town.	Birth rate.	Death rate.	Deaths under 1 year per 1,000 births.	Death rate over one year	Death rate fr'm the six Zymotic diseases	Death rate Diarrhœa	Death rate from Violence	Death rate from Inquest	Death rate fr'm uncertified causes
London ...	30·0	17·7	143	13·4	2·2	0·4	0·7	1·5	0·1
West Ham	33·8	16·1	137	11·4	3·1	0·4	0·5	0·7	0·6
Croydon ..	25·0	13·1	121	10·1	1·3	0·2	0·2	0·9	...
Brighton...	25·7	16·3	138	12·8	0·7	0·4	0·4	0·8	0·2
P'rtsmouth	27·3	15·1	131	11·4	1·5	0·4	0·4	0·9	0·1
Plymouth .	28·6	18·2	168	13·3	1·2	0·3	0·5	1·1	0·2
Bristol.....	28·1	17·2	149	13·0	1·7	0 3	0·5	1·2	0·2
Cardiff.....	34·2	16 1	141	11·3	1·5	0·4	0·8	1·4	0·1
Swansea ...	32·1	16·9	162	11·7	1·5	0·2	0·3	0·9	0 1
W'hmpton.	33·9	20·6	165	15 0	2·4	0·7	0·6	1·4	0·1
Birm.	31·6	18·6	163	13·4	1·9	0·5	0·6	0·5	0·9
Norwich ...	29·6	18·6	164	13·8	1·0	0·4	0·3	1·2	0·3
Leicester...	31·3	14·6	162	9·5	0·9	0·9	0·4	0·9	0 4
Nottingh'm	28·5	17·1	173	12·1	1·7	0·5	0·5	1·0	0 2
Derby	29·2	14·9	123	11·3	1·2	0·3	0·6	1·5	0·1
Birkenhead	30·5	18·0	142	13·6	2·1	0·4	0·4	1·3	0·08
Liverpool..	35·2	23·7	179	17·4	2·4	1·0	1·2	1·7	0 8
Bolton.....	31·4	18·7	161	13 6	1·0	0·7	0·5	1·3	0·1
Manchester	31·9	20·3	159	15·2	1·7	0·6	0·8	1·6	0·2
Salford.....	34·2	20·9	173	14·9	2·5	0·6	0·7	1 2	0·5
Oldham	27·1	18·4	160	14·0	1·5	0·3	0·4	1·1	0·1
Burnley	32·1	18·6	170	13·1	1·6	0·7	0·5	0·9	0·3
Blackburn	**28 7**	**17·2**	**168**	**12·4**	**0 8**	**0·6**	**0 5**	**0 8**	**0 6**
Preston ...	32·0	20·7	203	14·2	1·1	1·4	0·4	0·6	0·9
Hudd'sfield	20·1	15·7	159	12·5	1·2	0·1	0·3	0·5	0·5
Halifax	23·0	16·4	134	13·3	0·8	0·04	0·4	0·8	0·8
Bradford...	26·6	16·9	144	13·1	1·4	0·2	0·5	1·1	0·1
Leeds	32·1	17·8	155	12·9	1·5	0·4	0·6	1·5	0·1
Sheffield ...	33 2	17·7	156	12·4	1·6	0·5	0·5	0·9	0·6
Hull.....	32·2	17·3	141	12 7	1·2	0·4	0·7	1·0	0·6
Sunderland	35·0	20·7	166	14·8	2·2	0 8	0·7	1·6	0·2
Gateshead .	34·0	17·6	152	12·4	1·8	0·4	0·4	1·1	0·1
Newcastle..	30·9	18·2	156	13·3	1·6	0·4	0·7	1·5	0 1

The death rates over one year are extremely interesting as they eliminate to some extent the very disturbing influence caused by a decreasing birth rate.

TABLE IX.

Towns.	Recorded Death rate 1894	Factor for correction for Sex and Age Distribution	Corrected Death rate 1894	Comparative Mortality Figure 1894
England and Wales..	16·6	1·0000	16·6	1000
London	17·7	1·0656	18·8	1132
West Ham	16·1	1·0788	17·3	1042
Croyden	13·1	1·0424	13·6	819
Brighton	16·3	1·0110	16·4	987
Portsmouth.....	15·1	1·0224	15·4	927
Plymouth	18·2	0·9720	17·6	1060
Bristol.....	17·2	1·0447	17·9	1078
Cardiff.....	16·1	1·1159	17·9	1078
Swansea	16·9	1·0924	18·4	1108
Wolverhampton	20·6	1·0464	21·5	1295
Birmingham	18·6	1·1050	20·5	1234
Norwich	18·6	0·9579	17·8	1072
Leicester	14·6	1·0855	15·8	951
Nottingham	17·1	1·0752	18·3	1102
Derby	14·9	1·1031	16·4	987
Birkenhead.....	18·0	1·0993	19·7	1186
Liverpool	23·7	1·1094	26·2	1578
Bolton.....	18·7	1·1331	21·1	1271
Manchester.....	20·3	1·1331	23·0	1385
Salford	20·9	1·1244	23·4	1409
Oldham	18·4	1·1453	21·0	1265
Burnley	18·6	1·1487	21·3	1283
Blackburn	**17·2**	**1·1231**	**19·3**	**1162**
Preston	20·7	1·0993	22·7	1367
Huddersfield	15·7	1·1627	18·2	1096
Halifax	16·4	1·1133	18·2	1096
Bradford	16·9	1·1446	19·3	1162
Leeds	17·8	1·1082	19·7	1186
Sheffield	17·7	1·1120	19·6	1180
Hull.....	17·3	1·0504	18·1	1090
Sunderland.....	20·7	1·0493	21·7	1307
Gateshead	17·6	1·0740	18·9	1138
Newcastle	18·2	1·0892	19·8	1192

In comparing the death-rates of the large towns with one another it is necessary first to take into account the distribution of the people as regards age period, and sex. The factors given in the preceding table are those by which the death-rates must be multiplied in order to make them comparable. The corrected death-rates are much more closely an index of the sanitary condition of a town than the recorded death-rates. It will be noticed that in only two of the large towns is the corrected death-rate lower than the recorded death-rates. The disturbance in the death-rates of towns is due to the influx of young people.

TABLE X.

Showing Population, Birth-rates, and Death-rates for the last 14 years.

Year.	Estimated Population.	Birth rate.	Death rate.	Zymotic Death rate including Diarrhœa.	Death-rate from Bronchitis, Pneumonia & Pleurisy.	Death rate from Phthisis.	Deaths under one per 1,000 Births.
1881	104.388	37·5	22·4	2·3	5·3	1·9	181
1882	105,897	36·9	24·3	4·1	5·6	1·8	205
1883	107,427	40·0	23·9	2·5	6·2	1·9	185
1884	108,980	37·9	23·6	3·6	4·4	1·7	173
1885	110,555	36·1	21·3	2·1	4·6	1·3	142
1886	112,153	35·6	24·7	3·8	4·4	1·8	157
1887	113,774	36·5	25·3	4·0	5·8	1·5	204
1888	115,418	35·6	24·0	3·9	5·8	1·5	190
1889	117,086	35·5	25·4	5 1	6·8	1·5	221
1890	118,780	33·8	23·4	2·8	7 0	1·8	194
1891	120,496	33·9	24·9	3·2	7·5	1·3	207
1892	122,240	31·7	20·8	2·1	5·1	1·0	199
1893	124,006	30·8	22·5	4·0	5·2	1·0	241
1894	125,797	28·7	17·2	1·5	3·8	1·1	168

TABLE XI.—Deaths and Death-rates at Age Periods for 6 years.

Age Periods.	1889.		1890.		1891.		1892.		1893.		1894.	
	Total Deaths	Death rate.	Total Deaths	Death rate	Total Deaths	Death rate	Total Deaths	Death rate	Total Deaths	Death rate	Total Deaths	Death rate
0 to 5	1532	102·5	1105	73·7	1380	91·8	1067	70·6	1363	90 2	880	58·0
5 to 15	141	5·2	117	4·2	120	4.3	105	3·6	99	3·4	97	3·3
15 to 25	140	6·0	157	6·7	132	5·5	111	4·6	112	4·6	112	4·5
25 to 35	163	8·5	189	9·7	163	8·2	130	5·4	132	6·4	130	6·2
35 to 45	201	14·4	279	19·7	227	15·7	208	10·3	203	13·6	171	11·3
45 to 55	241	24·5	270	27·0	288	28·4	228	22·2	206	19·7	214	19·9
55 to 65	292	49·6	350	58·6	367	60·5	279	45·3	282	45·1	242	38·1
65 to 75	253	93·6	274	98.7	311	109·1	280	95·5	261	86·9	219	71·0
75 & up.	114	167·4	141	205·2	128	184·9	133	190·8	135	192·3	108	152·9

TABLE XII.

Analysis of Deaths under One Year of Age for last Five Years.

	1890		1891		1892		1893		1893	
	Deaths	Rate per 1000 Births.	Deaths	Rate per 1000 Births.	Deaths	Rate per 1000 Births.	Deaths	Rate per 1000 Births.	Deaths	Rate per 1000 Births.
Six Zymotic Diseases ...	12	2·9	75	18·3	62	15·9	59	15·4	29	8·0
Diarrhœa.....	108	26·8	90	22·0	78	20·0	190	49·7	58	16·0
Lung Diseases.....	154	38·3	197	48·2	153	39·4	172	45·0	103	28·4
Convulsions	129	32·1	100	24·4	98	25·2	85	22·2	68	18·7
Tuberculosis	60	14·9	50	12·2	60	15·4	81	21·1	11	3·0
Debility, Atrophy, Inanition	78	19·4	38	9·3	48	12·3	23	6·0	73	20·1
Premature Birth, Developmental	109	27·1	150	36·7	154	39·6	111	29·0	87	24·0
Dentition.....	17	4·2	41	10·0	20	5·1	7	1·8	11	3·0
All others	122	30·3	107	26·1	103	26·5	194	50·7	169	46·6
All Causes	782	194·7	848	207·5	776	199·8	922	241·2	609	168·0

INFANTILE MORTALITY.

The infantile death-rate which averaged considerably over 200 from 1886-1893 fell last year to 168. In 1894 the deaths were 609, or 313 less than in 1893. Nearly half the decrease was due to diarrhœa. As usual the deaths in the third and fourth quarters were higher than those of the first two quarters, but there was not that great disparity that usually prevails.

The influence of the employment of married women in factories upon infantile death-rates has given rise to much interesting discussion during the year, and the matter has been brought specially under the notice of the Home Secretary. Considerable doubt has been expressed as to whether this influence has not been greatly exaggerated. It has been pointed out that during the last eight or nine years the general tendency has been for the mortality amongst infants to increase, and this without any great increase in the employment of married women. It is a great pity that more reliable statistics have not been obtained. This is to a great extent due to the fact that the registrars do not supply details as to mothers employment, and the census returns do not give the number of married women employed in any industry.

Circulars were issued to the various factories asking for the total number of women over sixteen years of age employed, and the number of married women. For various reasons the replies only represented a little over one-half the female cotton operatives, but I think the proportion between married and single may be taken as fairly accurate. The total number of women included in the returns I received was 8,566; of these 3,053, or 35·6 per cent., were married. If this per centage be accepted as correct for the whole town there will be almost 6,000 married women employed in the cotton industry in Blackburn. Unfortunately the age distribution of these married women is not

known, but it seems very probable that most of them are young, and that after two or three confinements they find it as economical and more convenient to stay at home in order to look after their children.

The influence of the employment of married women in factories cannot be gauged properly by considering numbers only. It is a fact that a very large proportion of the women work in the factory during the first few years of married life. It is during these years that the habits of the women are formed. I was struck when making some inquiries concerning deaths under one year by the large number of women amongst the working classes who weaned their children, even though they had left off work in the mill.

It seems almost impossible, for economic reasons, to prevent married women working in the factories. If this be granted the best course is to see that the children are well cared for during mill hours, and no doubt well organised crêches are the best way out of the difficulty. They do not, however, show any signs of spontaneously increasing. If they became general they would probably be almost self supporting. Some sort of education and inspection of those who are allowed to receive children to nurse should be necessary.

In a community like this the general principles of "hand feeding" should be inculcated as much as possible. Ignorance on this matter is widely spread and deeply rooted. In order to do something to lessen this I have drawn up some simple but precise directions which, although requiring modification sometimes, are generally applicable to the majority of children. These have been circulated through the registrars, who have kindly offered to give one to each person registering a birth. In this way it is hoped that a more intelligent interest will be taken in the feeding of children.

Of course it must be distinctly understood that these directions are simply for healthy children, who in the ordinary way have no medical attendant.

RULES FOR FEEDING OF INFANTS.

When the mother is healthy the child should have breast milk alone up to eight months, and be fed partly on breast milk up to the end of the year.

If the child has to be brought up "*by hand*" the following points should be observed :—

(1) Fresh cow's milk should be the only food for the first eight months. After this a little prepared food, or a little bread crumb, may be *added* to the milk. After 18 months some mutton or beef gravy and bread soaked in gravy or milk, and even a little pounded meat, may be given. For two years milk should be the principal article of diet.

(2) Quantities of milk to be given :—

During the first week about ... ½ pint of milk daily.
From the 2nd to the 6th week, ½ to ¾ „
„ 6th 12th „ ¾ to 1½ „
At 6 months ... ... 1½ pints of milk daily.
„ 10 „ ... ... 2 „ „

(3) The milk should be mixed with water in the following proportion :—At birth, equal quantities of milk and water; at three months, half as much water as milk ; at nine months, pure milk. Of this mixture at birth about four tablespoonfuls should be given at each meal, and at three months about eight tablespoonfuls. The addition of a little cream and sugar will improve the milk.

(4) During the day a child should be fed every two hours for the first three weeks, and every three hours afterwards ; during the night every four hours. Irregular feeding is very injurious.

(5) The milk should be boiled immediately before use. It should be kept in a cool, well ventilated place, and never in the sitting-room. The vessel containing it should be kept scrupulously clean. A bottle without tubing and with a reversible teat should be used. The bottles and teats should be scalded and thoroughly cleansed after use, and one bottle should be soaking in water, or water containing a little soda whilst the other is in use.

TABLE XIII.

Deaths under one year of age for the four quarters.

Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
1894	135	137	157	180	609
1893	184	182	339	217	922
1892	207	169	225	175	776
1891	179	244	213	192	828
1890	191	147	193	251	782

TABLE XIV.

28 Large Towns.	Deaths Under One Year to a 1,000 Births Registered.										Average.
	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	
London	148	159	158	146	141	163	154	154	164	143	153
Brighton	131	160	149	148	131	165	129	151	169	138	147
Portsmouth	131	174	143	134	139	135	138	155	164	131	144
Norwich	136	202	158	165	164	183	159	181	195	164	170
Plymouth	156	154	196	164	166	161	180	137	169	168	165
Bristol	152	149	149	123	146	151	139	147	141	149	144
Wolverhampton	140	175	176	168	181	175	187	172	208	165	174
Birmingham	157	175	176	149	170	184	171	165	198	163	170
Leicester	193	216	215	203	208	197	214	197	220	162	232
Nottingham	157	180	170	151	182	160	170	167	170	173	168
Derby	137	150	142	143	149	158	139	173	156	123	147
Birkenhead	137	162	156	152	170	166	148	168	196	142	159
Liverpool	174	188	186	168	188	196	188	180	211	179	185
Bolton	160	186	171	173	166	176	164	185	199	161	174
Manchester	175	183	191	177	176	188	192	178	203	159	182
Salford	174	198	195	184	182	200	194	185	210	173	189
Oldham	166	174	187	150	178	180	193	176	187	160	175
Blackburn	**142**	**157**	**204**	**190**	**221**	**194**	**207**	**199**	**241**	**168**	**192**
Preston	218	233	214	188	265	245	232	216	269	203	228
Huddersfield	157	167	181	157	167	169	177	149	141	169	163
Halifax	132	171	153	154	175	170	169	159	173	134	159
Bradford	143	167	178	154	183	170	186	154	197	144	167
Leeds	155	181	172	173	177	172	177	168	206	155	173
Sheffield	164	168	177	178	174	194	170	170	191	156	174
Hull	128	164	165	139	184	159	172	165	206	141	162
Sunderland	158	151	151	132	181	172	178	156	188	166	163
Newcastle-on-Tyne	172	155	174	136	174	170	174	150	174	156	163
Cardiff	189	168	172	143	157	167	146	163	179	141	162

TABLE XV.

DEATHS UNDER ONE YEAR ARRANGED ACCORDING TO DAYS, WEEKS AND MONTHS.

	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd week.	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8.	8 months to 9.	9 months to 10.	10 months to 11.	11 months to 12.	Total.
Six Zymotic Diseases	...	...	...	...	...	...	...	...	...	1	...	1	4	2	5	2	3	2	2	3	1	2	2	29
Diarrhœa	...	...	...	...	...	...	...	...	...	4	...	4	6	1	7	8	9	3	5	5	4	2	4	58
Lung Diseases	...	...	1	...	...	..	...	1	2	2	2	7	7	8	12	12	10	5	11	5	12	4	10	103
Convulsions	5	4	1	1	...	1	1	13	3	5	1	22	8	8	6	8	4	4	...	4	2	1	1	68
Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4	...	...	1	...	1	1	11
Debility, Atrophy, Inanition	14	1	1	2	1	1	1	21	5	5	2	33	17	5	4	4	3	3	2	...	...	1	1	73
Premature Birth and Developmental	58	5	7	1	...	1	...	72	7	1	3	83	4	...	...	...	...	...	..	...	...	...	...	87
Dentition	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	4	...	1	3	1	...	11
All Others	5	...	2	1	2	1	2	13	5	7	5	30	18	16	15	16	13	15	16	10	6	7	7	169
All Causes	82	10	12	5	3	4	4	120	22	25	13	180	64	41	50	54	46	36	36	29	28	19	26	609

This Table is of special interest in showing what a large number of children die on the First day and during the First week—deaths which must be associated to some extent with employment before confinement.

Uncertified Deaths.—Although the death-rate from Uncertified Deaths is smaller than last year there were only four towns with higher rates. There can be no doubt that the uncertified death-rate should be kept as low as possible.

CAUSES OF DEATH.

Detailed particulars of the causes of death, and at the ages at which death took place will be found in appendix I.

TABLE XVI.

Death Rates from the principal groups of Diseases for 1891, 1892, 1893, and 1894.

DISEASES.	1891		1892		1893		1884	
	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate
1. Zymotic (including Diarrhœa	527	4·3	349	2·8	592	4·7	258	2·0
2. Parasitic	1	0·008	...	...	1	0·008	...	...
3. Dietetic.....	47	0·39	62	0·50	30	0·24	26	0·20
4. Constitutional	346	2·8	322	2·6	375	3·0	330	2·6
5. Local	1736	14·4	1369	11·1	1414	11·4	1186	9·4
6. Developmental	339	2·8	342	2·6	217	1·7	165	1·3
7. Violent Deaths	80	0·66	67	0·54	49	0·39	64	0·5
8. Not specified or ill defined	40	0·33	40	0·32	115	0·92	144	1·1
	3116	25·8	2551	20·8	2793	22·5	2173	17·2

ZYMOTIC DISEASES.

There were 201 deaths from the seven Zymotic Diseases, giving a death-rate of 1·6 compared with 4·0 in 1893.

TABLE XVII.

Showing number of cases of Infectious Diseases notified from 1881 to 1894.

Disease.	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894
Small Pox	28	4	4	...	4	28	42	98	...	...	...	4	79	13
Scarlet Fever.....	103	331	275	211	181	422	1695	829	737	324	196	176	190	156
Diptheria	...	...	...	...	...	...	...	...	4	5	1	3	2	38
Enteric Fever... ...	289	210	442	268	135	105	153	146	111	121	106	79	161	129
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	420	545	721	479	320	555	1890	1073	852	450	303	262	432	336

TABLE XVIII.

	33 Large Towns.	Blackburn.
Seven Zymotic Diseases	2·4	1·5
Measles	0·6	0·1
Scarlet Fever	0·2	0·07
Whooping Cough	0·4	0·3
Typhoid Fever	0·1	0·2
Diarrhœa	0·4	0·6
Diphtheria	0·3	0.1
Small Pox	0·04	...

MEASLES.—There were only 13 deaths from Measles compared with 140 in 1893.

WHOOPING COUGH.—There were 43 death from Whooping Cough compared with 30 in 1893.

SCARLET FEVER.

There were 10 deaths from Scarlet Fever compared with 4 in 1893. There were, however, only 156 cases notified compared with 190 in 1893.

Another year has passed over without that epidemic of Scarlet Fever which seemed so probable. Such an immunity as we have had during the five years, 1890-94, has not been known for at least 17 years, and previous to this we have no record. Not only have the cases been few, but as a whole they have been of a mild type.

Several times during the year there have been opportunities for the spread of the disease which under favourable conditions would certainly have produced an epidemic. The danger has arisen mostly from cases which have been undiagnosed, and which in several instances have attended school whilst peeling. In all these cases an effort was made by visiting the absentees to find if there were any other children suffering from Scarlet Fever which had escaped detection. As a rule no such cases were discovered.

For example a child was found on September 18th, who had been ill from Scarlet Fever for 3 weeks, and was peeling freely all over. She had not been attended by any medical man, and it came to our knowledge from another case developing in the same house. She had attended school from September 3rd until September 8th. That is she had been at school in close communication with numerous other children for five days whilst peeling freely, and as far as we could judge had not communicated the disease to a single child.

In another instance a case of Scarlet Fever was notified at a certain house. On examining the other children it was found that three of them were peeling and two others had been ill. These children were examined on March 15th, and the following was the history :—

(1) Boy, age 9, skin peeling off hands and feet ; history of headache, sore throat, swelling in neck, vomiting on January 17th and 18th ; away from school January 17th—29th, and February 5th—10th ; has been attending since.

(2) Boy, age 7, similar history ; hands and feet peeling ; attended school since February 8th.

(3) Boy, age 5, March 1st, rash, sore throat, no peeling.

(4) Girl, age 3, slight peeling ; similiar history to 1 and 2.

BLACKBURN

Registration Sub-Districts.

Scarlet Fever Cases Red
Typhoid Fever " Black
Diphtheria " Yellow

DURHAM, LITHO., BLACKBURN

(5) Child, age 6 months, commenced about March 1st with rash followed by suppuration of ear.

These cases were only brought to light by the fact that the mother caught Scarlet Fever and the case was notified to us by a medical man. The great danger of spread through the school was at once recognised. Those absentees who could not be accounted for were visited, but only one case was discovered. Two others were notified amongst children belonging to this school during the next fortnight. The school was disinfected as thoroughly as possible.

Only about ten cases have been traced directly to the school infection, but as the majority have not been traced at all probably the true number would be far in excess of this.

I am glad however to be able to report that the importance of isolation is gradually gaining ground amongst the people at large. Before the Fever Hospital was open it was very common to find cases of Scarlet Fever in the ordinary living rooms. Now it is becoming generally understood that proper isolation must be provided at home or the patient removed to the hospital. The fact that the danger from Scarlet Fever diminishes with age cannot be too much insisted upon as there are many people still who think that this is one of those diseases that must be got over, and the earlier the better.

SCARLET FEVER.

Age Periods ...	0-1	1-5	5-10	10-15	15 upwds.
Notified Cases ...	3	60	61	16	16
Deaths...	...	7	3	.....	.....

The mortality under 5 years of age was 11 per cent. and that over 5 years of age 3 per cent.

TYPHOID FEVER.

These were 129 cases and 32 deaths, compared with 161 cases and 27 deaths in 1893.

The difficulty of diagnosing typhoid fever in its early stages is one of the greatest obstacles in preventing the spread of this disease. The average duration of illness before notification was 12 days. In one instance the illness had lasted 48 days, and in several instances over 30 days. It is from these cases that the disease is spread. The germs gain access to the sewers, and also contaminate the excreta tubs and middens. An excreta tub may be removed from a house where there is a case of undiagnosed typhoid, and, after being emptied, taken back to another house, and in this way the disease may be readily spread. To obviate this danger, and for other good reasons, I have recommended that every tub be cleansed with disinfectants after being emptied. This has not, however, hitherto been done.

In four houses there were two cases, in two there were three cases, and in one four cases. These might either be due to persistence of the original cause or direct infection. In some it nould be definitely proved to direct infection, as the original cases were not in connection with the houses in which the persons lived. With the ordinary attention that people get in small cottage houses, there is every facility for direct infection.

Only two cases were traced from outside the town. No cases were traced to infection through food.

The following was the sanitary accommodation of the infected houses :—

43 had water closets.
37 had tubs.
34 had middens.

TABLE XIX.

Notified Cases of Typhoid Fever for 1889-1894 in Enumeration Districts.

District.	1889	1890	1891	1892	1893	1894	Total for 6 years.	District.	1889	1890	1891	1892	1893	1894	Total for 6 years.
1	0	0	0	1	1	0	2	41	2	3	1	1	1	1	9
2	0	1	1	0	1	0	3	42	2	0	3	0	6	2	13
3	0	0	0	1	1	0	2	43	4	3	2	2	8	2	21
4	0	1	2	1	1	0	5	44	0	0	0	0	0	0	0
5	0	0	1	0	0	0	1	45	0	0	0	1	0	1	2
6	1	0	1	0	0	1	3	46	0	0	0	0	1	0	1
7	2	2	3	0	1	1	9	47	0	0	0	0	2	1	3
8	1	3	2	0	3	0	9	48	0	1	1	0	2	3	7
9	0	0	0	0	2	0	2	49	0	0	0	1	1	0	2
10	2	2	1	0	1	0	6	50	2	1	0	0	1	1	5
11	1	1	0	3	0	1	6	51	1	1	2	1	1	0	6
12	1	0	1	2	1	1	6	52	0	0	0	0	0	0	0
13	0	0	0	2	2	0	4	53	0	1	4	1	1	0	7
14	0	1	1	1	3	1	7	54	2	1	0	1	1	1	6
15	1	4	1	1	4	0	11	55	0	4	0	0	0	1	5
16	1	0	1	0	5	1	8	56	3	0	4	0	5	0	12
17	1	3	0	0	2	0	6	57	1	2	0	0	3	4	10
18	4	6	1	1	1	0	13	58	0	4	0	1	2	0	7
19	0	4	0	0	0	1	5	59	1	7	0	1	1	1	11
20	3	4	0	1	1	0	9	60	5	1	1	2	0	1	10
21	4	6	1	1	0	0	12	61	0	0	0	0	0	3	3
22	1	1	0	0	1	1	4	62	0	0	1	4	3	0	8
23	2	1	1	0	0	2	6	63	1	1	1	0	1	0	4
24	4	4	1	2	2	1	14	64	0	1	1	1	0	0	3
25	2	1	1	1	1	1	7	65	0	0	3	2	1	1	7
26	1	1	0	1	0	0	3	66	2	1	7	1	2	2	15
27	1	0	2	1	2	4	10	67	0	1	2	1	2	3	9
28	4	0	0	1	1	2	8	68	0	3	3	1	1	1	9
29	0	0	0	0	1	0	1	69	0	3	0	0	0	0	3
30	2	1	2	2	1	3	11	70	2	1	1	2	3	1	10
31	2	3	0	1	3	1	11	71	3	0	1	2	2	3	11
32	1	1	0	1	2	0	5	72	1	1	2	0	1	0	5
33	0	1	0	1	3	4	8	73	1	1	2	1	2	1	8
34	1	1	1	1	0	1	5	74	1	0	2	1	0	1	5
35	1	0	0	0	0	2	3	75	0	0	0	0	0	1	1
36	0	0	1	0	0	0	1	76	0	0	2	1	0	0	3
37	1	0	2	0	8	11	22	77	0	0	0	2	0	0	2
38	0	0	0	0	1	3	4	78	0	1	0	0	1	0	2
39	0	0	2	0	1	3	6	79	1	0	1	0	0	0	2
40	0	1	2	0	2	4	9	80	3	0	0	3	2	0	8

TABLE XIX.—Continued.

Notified Cases of Typhoid Fever for 1889-1894 in Enumeration Districts.

District.	1889	1890	1891	1892	1893	1894	Total for 6 years.	District.	1889	1890	1891	1892	1893	1894	Total for 6 years.
81	0	0	0	0	0	0	0	98	2	0	0	0	1	1	4
82	0	1	1	2	5	2	11	99	1	0	0	0	0	0	1
83	1	2	1	1	2	0	7	100	1	1	1	0	1	0	4
84	0	0	0	0	0	1	1	101	1	0	1	0	1	2	5
85	1	1	1	1	0	0	4	102	1	0	0	1	0	0	2
86	1	0	0	0	0	1	2	103	2	2	3	0	0	0	7
87	0	2	0	0	0	0	2	104	1	5	1	3	3	1	14
88	0	0	1	0	0	0	1	105	1	1	2	0	2	0	6
89	0	2	1	0	1	0	4	106	1	0	0	0	0	0	1
90	1	1	2	0	2	1	7	107	4	2	1	0	3	2	12
91	2	0	1	1	0	0	4	108	0	0	1	1	2	2	6
92	0	2	1	1	3	1	8	109	1	0	2	2	5	6	16
93	1	2	1	1	0	4	9	110	0	0	1	0	9	5	15
94	1	1	0	0	0	1	3	111	1	1	0	3	1	3	9
95	1	1	2	1	0	1	6	112	4	1	2	1	1	1	10
96	0	0	0	1	0	0	1	113	1	0	1	3	0	3	8
97	0	0	0	2	3	0	6								

The accompanying table which shows the notified cases of Typhoid Fever during the last six years in the enumeration districts is one of great interest. It is necessary in order that one's mind may not be unduly influenced by temporary fluctuation to compare one year with another. During the year 1894 the most striking fact was the large number of cases in No. 37 district. This is a district which is not in any sense overcrowded. In fact a considerable part of it is very sparsely populated. It varies in height from 460 to 600 feet above the sea level. In this district several branches of the main sewer in Grimshaw Park terminate. The sewers are very steep for in a distance of about

500 yards there is a rise of about 90 feet. It is pretty clear therefore that in these higher districts there will be a considerable pressure of sewer gas if the sewers are not well ventilated or the ventilators become stopped. There has however been no special complaints with regard to the sewer ventilators in this part of the town. On one side of Haslingden Road there were no less than six separate houses infected. These could not be traced from one to the other by direct infection. It seems very probable that the infection was either from the sewers or from the middens with which these houses are provided. The drains of the houses have been tested with the result that in five there were no defects and in one there was a defect at the base of the downspout in the yard.

Looking at 1894 only, or along with 1893, it would appear that this district, measured by the amount of Typhoid, is extremely insanitary, in fact much worse than any other part of the town. But during the previous four years it was rather below the average as regards this disease. It will be seen that in many of the districts two bad years will occur together and perhaps be proceeded or followed by periods of comparative immunity. In other words there are a series of small local epidemics due probably to the typhoid germs being produced and disseminated by some means, either sewers or otherwise, throughout the district. The epidemic declines as the infective material is destroyed or washed away. It may be taken as true that Typhoid Fever will not spread to any extent unless by food in a sanitary district. The absence of Typhoid Fever does not however show that a district is healthy, for there may be simply an absence of the specific germ that produces the disease.

I have been advocating that all sewers should have inspection, and ventilating chambers so placed that every part can be examined. As a beginning it would be well to commence this in those districts where Typhoid Fever has during the last two or

three years been most prevalent. It is the custom at present when a case is reported to collect and burn the excreta daily : to have the excreta tub or midden emptied at once, the contents burnt, and the receptacle disinfected with chloride of lime as completely as possible. We have however no means of dealing at all effectively with the infectious material which has already gained access to the sewers. Many of the back sewers, especially those into which middens are trrapped contain a deposit. Notwithstanding all our precautions then here is an excellent place for the breeding and dissemination of the typhoid poison. If an inspection chamber were placed at each end, the sewer could be examined and thoroughly cleansed with disinfectant.

In district No. 37 there was another possible cause for some of the cases of Typhoid Fever. The sanitary conveniences of Christ Church School were of a very unsatisfactory kind. They were not only bad, but badly looked after. Tank closets belonging to schools, should evidently be flushed at least once a day, otherwise any infective material introduced may be dangerous.

It does not seem possible to draw any inferences with regard to the effect of elevation on the incidence of typhoid in the town. For although many of the low lying districts in the middle of the town have been very free, still others, towards Witton and Livesey, have suffered rather severely. Of the districts at higher level, those on the south side have been affected seriously, and those on the north have mostly escaped. Nor does the geological formation, as far as one can judge, have any marked effect.

The smoke test has been applied to the drains of 51 houses where typhoid fever has occurred. In 29 of these defects were found of one kind or another.

DIPHTHERIA.—TABLE XX.

Analysis of Cases.

Number of Case.	Date Notified	Address.	Age.	School.	Date of Onset.	REMARKS as to Infection.
1	Feb. 15	46 Florence Street	3		Feb. 8	
2	Mar 24	81 Leamington Street	2		March 23	
3	April 7	122 Pringle Street	2		April 3	
4	,, 6	15 Copperfield Street	2½	Crêche	,, 5	
5	,, 6	15 Copperfield Street	13 m'ths	Do.	,, 30	From No. 3.
6	,, 23	11 Copperfield Street	12	Audley Range	,, 7	Last at School, Jan. 22nd ; probably infected from 15 Copperfield Street where the child had been.
7	,, 30	35 Bentham Street	4	Mill Hill	,,26-27	Possibly from a case in John Bright Street.
8	,, 30	10 Copperfield Street	7	Audley Range	,, 25	Possibly from other infected houses in same street.
9	May 11	105 Ingham Street	3		May 10	
10	,, 24	27 Walter Street	2		,, 18	
11	June 22	37 Shorrock Lane	9	Mill Hill	June 20	
12	,, 27	12 Moor Street	18		,, 24	
13	,, 27	26 Walter Street	5	Audley Range	,, 23	Continued to attend school until June 25th.
14	July 2	24 Walter Street	3½		,, 28	Possibly from No. 26 Walter Street.
15	,, 5	46 Dewhurst Street	7	Audley Range	,, 28	Not improbably from case 13, at school ; attended up to July 2nd.
16	,, 5	46 Dewhurst Street				From previous case (in same house).
17	,, 12	30 Angela Street	36		July 9	
18	,, 10	7 Maudsley Street	8	Audley Range	,, 1	Not improbably from School ; attended up to July 2nd.

Diphtheria Cases Continued.

Number of Case.	Date Notified	Address.	Age.	School.	Date of Onset.	REMARKS as to Infection.
19	Sep. 19	20 Mosley Street	3		Sep. 15	
20	Sep. 26	80 Mosley Street	10	Christ Church	,, 23	
21	,, 26	47 Taylor Street	3		,, 16	
22	Oct. 24	96 Walter Street	4	Audley Range	Oct. 21 or earlier	Had a sore throat since October 12th; attended school up to October 18th.
23	Nov. 7	96 Walter Street	2		Nov. 2	From No. 22.
24	Oct. 29	33 Shorrock Street	5		Oct. 23	
25	Nov. 19	68 Queen's Park Road	5	Audley Range	Nov. 13	Probably from school; attended up to November 12th.
26	,, 20	68 Audley Lane	3½	Do.	,, 12	Do. do. November 14th
27	,, 21	81 Chester Street	5	Do.	,, 16	Do. do. November 19th
28	,, 23	107 Scotland Road	5	Do.	Oct. 9	Do. do. October 9th
29	,, 26	120 Alker Street	3	Do.	Nov. 16	Probably indirectly from School; an elder brother attending same school had suffered from a suspicious sore throat two weeks previously.
30	,, 29	22 Archibald Street	5	Mill Hill	,, 24	
31	Dec. 1	12 Byrom Street	2		,, 27	
32	,, 1	110 Alker Street	16		Nov. 28	
33	,, 4	91 Riley Street	20		Dec. 2	
34	,, 4	114 Riley Street	3½	Audley Range	Nov. 30	Last at School November 12th.
35	,, 8	40 Kay Street	8	All Saints	,, 30	
36	,, 17	308 Audley Range	4	Audley Range	Dec. 15	Last at School December 17th.
37	,, 17	40 Kay Street	5	All Saints	,, 17	From previous case in same house.
38	,, 17	40 Kay Street	2		,, 17	,, ,,
39	Dec. 14	43 Hazel Street	1		,, 19	

DIPHTHERIA.

Generally throughout the towns of England there has been a very marked increase of diphtheria during the last few years. Up to 1894 Blackburn had escaped in a remarkable manner, and with the exception of an occasional isolated case the disease was non-existent. Last year however this very satisfactory state of things came to an end.

	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894
Cases	...	...	...	...	...	...	...	...	...	4	5	1	3	3	40
Deaths	...	...	2	2	1	1	...	1	1	4	4	...	1	2	14

What the precise causes of this increase are it is difficult to say. With regard to the country generally it is the opinion of many authorities that compulsory education with its crowding together of children has been one of the principal causes. It is interesting to note in this connection that there was a small but definite epidemic which could I think be traced undoubtedly to a school.

In looking over the preceding analysis it will be noticed that by far the larger number of cases of Diphtheria were in Audley District. The others were fairly well distributed throughout the town with the exception of a few cases that occurred at Mill Hill.

In several of the isolated cases it has been impossible to suggest any mode of infection unless the infection may be carried through the sewers. It will however be very evident to anyone examinining the above list that there are groups of cases which have been dependant upon one another or upon some common cause. One of the chief difficulties in investigating an epidemic arises from the mildness of many of the cases and the impossibility of arriving some time afterwards at any positive conclusion concerning such cases.

Two cases of Diphtheria were reported amongst children who were being nursed at the crêche in Dickens Street. I found that

every precaution was being exercised to prevent its spread, but as there were several absentess from illness considerable anxiety was felt. I visited the homes of the absentees and consulted with the medical attendants. Two of these children died before my visit and the symptoms were certainly not unlike those of diphtheria. I advised that the safest plan instead of closing the crêche was to thoroughly disinfect it and rigorously exclude any children who were not perfectly healthy. For this purpose daily visits were made by a medical man and no further cases occurred here.

Although amongst the first 18 cases there were 5 at Audley Range School there was no sufficient reason at this time for saying that the school was spreading the disease. It does however seem not improbable that cases Nos. 15 and 18 were infected at school from No. 13.

It is worthy of note, however, that from July until October no further case of Dipththeria occured in this district. A natural question is could this have been due to the break in school attendances caused by the summer holidays ?

The cases which to my mind point very strongly to school infection are Nos. 22, 25, 26, 27, 28, and 29. These children attended Audley Range Infant School. They are arranged in the order the notification was received at the Health Office, but, as is shown in the preceding analysis, this is not by any means the order of attack. It will be seen that between the dates of November 12th and 16th there were four cases, and all these were from the same department in the same school.

Before concluding definitely that any disease has been spread by a school, it is necessary to enquire whether all the children in the particular district affected attend that school, and whether the infected houses are so close together that there is likely to be much intercommunication.

The children in this district attend also St. Thomas's and Maudsley Street Schools, at which we have had no cases. Many of the infected houses are separated by considerable distances.

After the notification of case No. 25 I inspected the school and reported to the school managers, and also to the Health Committee, I found the ventilation of the school very defective, but particularly those class rooms in which the very young children were placed. The following Table shows the area of inlets for fresh air, the number of children in the room, and the result of analysis of samples of air.

VENTILATION OF AUDLEY RANGE INFANT SCHOOL, AND RESULTS OF AIR ANALYSIS.

Room.	Air * Inlets.	Window space that opens.	Outlets.	No. of Children.	CO_2 per 1000.
1	$\frac{1}{3}$ sq. ft.	2 sq. ft.	$\frac{1}{2}$ ft.	53	2·6
2	$\frac{1}{3}$,,	1 ,,	$\frac{1}{2}$,,	45	
3	$2\frac{1}{2}$,,	6 ,,	1 ,,	189	2·3

* These inlets are rough, incapable of being cleaned, and the lower ends of the inlets are not one half the size of the above measurements.

Not only in Nos. 1 and 2 rooms was there almost no provision for fresh air through proper inlets, but the doors through which ordinarily some fresh air enters opened from another school-room. The windows which should open so as to allow complete flushing of the room with fresh air were almost useless for that purpose. Deficient ventilation will not of itself produce diphtheria, but it certainly will aid the spread both by lowering

the resisting power of the individual and concentrating the poison. Other sources of danger, of which perhaps the most important was a gallery that allowed the collection of dust, were at once removed. I advised that all pencils, sponges, etc., should be collected and destroyed, and also pointed out the danger of the children cleaning slates with their saliva.

The school was cleaned and disinfected throughout on November 24th.

The measures taken seemed to have had a good result, for since then it is probable that no case has arisen in connection with this school.

As far as one can judge the infection was first spread in the school by case No. 22. This child attended school from October 12th to the 18th while suffering from a sore throat.

Later on in my report I deal more fully with the question of school hygiene.

Apart from this small epidemic it has not been possible to associate the disease with any particular conditions. The house drains have not in many of the cases yet been tested. The houses do not seem to be specially damp.

Dampness is perhaps the insanitary condition which has hitherto been associated with diphtheria. In country districts where the disease is not so frequently communicated directly from person to person it is mostly found in damp low lying houses. The fact that Blackburn houses have no damp proof course is likely to hinder us seriously in our efforts to cope with the disease.

I have dealt somewhat fully with this subject because I feel it is of great importance. As previously pointed out, diphtheria is on the increase throughout the country, and last year was the first year that it seriously affected us. It is often more easy to

study a disease on its introduction than later, when the infection may be more uniformly distributed throughout the town.

Bacteriology has thrown considerable light upon the subject of diphtheria. Bacteriological examination is the only sure means of diagnosing diphtheria in its mild form, and as very important action depends upon accurate diagnosis this is of the greatest consequence. It has been found that the germs of the disease will remain in a persons throat for many weeks after the symptoms have passed. The germs too have been found in the throats of persons living in a house where there is a case of diphtheria although they themselves are not suffering. It is therefore very important that great care should be exercised in seeing that children are not allowed to go back to school until all danger of infection is passed. It is also advisable for persons who are more or less in contact with diphtheria to wash their mouths and throats regularly with disinfectants.

SMALL POX.

Analyses of Cases. TABLE XXI.

Number	Age	Date of Rash	Date of removal to Hospital	Type of Disease	Result	Date of Discharge	No. of days in Hospital	Vaccination.	No. of Persons Quarantined.	REMARKS.
1	46	Jan 29	Jan 29	Discrete	Recovered	Feb 24	26	2 indistinct marks	25	Contracted the disease at Haslingden.
2	32	Apl 1	Apl 1	Semi-Confluent	,,	May 15	45	vaccinated	...	Contracted the disease at Bradford.
3	33	,, 5	,, 8	Discrete	,,	May 31	53	vaccinated	...	Contracted the disease at Colne.
4	45	June 10	June 10	Semi-Confluent.	,,	July 16	36	3 marks	...	Had arrived in Blackburn only nine days before commencement of illness. Had stayed previously about a fortnight at a lodging-house in Ramsbottom where no doubt he had been infected.
5	18	June 16	June 17	Discrete	Recovered	July 13	26	4 marks	2	Was at Bury Barracks up to a day or two before admission, was sent away at the commencement of illness instead of being quarantined

6	24	„ 23	„ 25	„	„	„ 16	21	2 marks	...	Arrived in the town from Newchurch near Rawtenstall with rash already out.
7	22	„ 24	„ 25	„	„	„ 16	21	1 mark	...	Same history as No. 6.
8	21	July 8	July 8	Confluent	„	Aug 11	34	No marks	...	Probably from Wakefield where he had come from exactly 11 days before illness
9	22	„ 13	„ 16	Discrete	„	„ 11	26	2 marks	...	Had been wandering about amongst Irish haymakers and had caught it in this way or from 131 Chapel St.
10	6 m'hs	„ 30	Aug 2	Semi-Confluent	„	Sep 28	57	Not vaccinated	5	From No. 9. The parents refused to allow the child to be vaccinated notwithstanding that the danger was pointed out to them. Of all the people in the neighbourhood this child was the only one to contract Small Pox.
11	40	Aug 15	Aug 20	Discrete	Recovered	Sep 18	34	1 mark	1	From a house in Haslingden where he had stayed from August 3rd to 5th, and which was infected.
12	45	„ 29	„ 30	„	„	„ 18	19	4 marks	6	From No. 11.
13	33	„ 29	„ 30	„	„	„ 18	19	4 marks	...	From No. 11.

On the preceding page is an analysis of the Small Pox cases that occured during the year. In some respects there is a great similarity between the history of these cases and those of 1893. The first seven cases certainly, and possibly the first nine, were importations. The same thing was noticed in the previous year. No. 11, too, was imported. The three cases which undoubtedly did develope in the town were all under observation at the time, and consequently the likelihood of spread from these was extremely small.

This small outbreak, along with the epidemic of 1893, seems to point to the fact that small pox is a disease which can be stamped out in a vaccinated community with sufficient inspection and the help of the people at large. There always, however, remains the danger from overlooked or concealed cases. In 1893 from one overlooked case 12 arose, and if these had not been discovered and removed promptly a serious epidemic might have arisen. During last year no case appears to have been overlooked except No. 11, which was not diagnosed for five days after the commencement of the illness. From this man two other persons were infected.

The fourth case that occurred was introduced into the large lodging-house in Larkhill Street, which accommodates usually about 200 people. Fortunately an inspector was visiting the house night and morning, and as far as possible was seeing every lodger. By early removal the disease was prevented from spreading in this house.

The number of cases is too small to form any statistics with regard to vaccination or other matters. The two most severe ones, however, were Nos. 5 and 7. On the one no marks could be found, and the other was a child that had not been vaccinated.

This small number of cases confirms what was shown by the 1893 epidemic, viz., that Small Pox is primarily a disease of the vagrant class. It is very evident, too, that notwithstanding

repeated introductions its spread can be prevented if care be taken. If, then, we could only deal rigorously with vagarants there would be some chance of completely stamping out the disease. It was on account of the importance of action of this kind that the London County Council called a conference of representatives of the large towns to consider the spread of disease by vagrants. The resolutions adopted by the conference were as follows, viz. :—

1. That common shelters which are not subject to the law relating to common lodging-houses should be made subject to such law.

2. That there should be power to the local authority to require medical examination of all persons entering common lodging-houses and casual wards, and that each inmate of a common lodging-house or casual ward should on admission have a bath of fresh water.

3. That the local authority should have power to order the keeper of a common lodging-house in which there has been infectious disease, to refuse fresh admissions for such time as may be required by such authority.

4. That the local authority should be empowered to require the temporary closing of any common lodging-house in which infectious disease has occurred.

5. That the local sanitary authorities should have power to require the detention of any inmate of a common lodging-house or casual ward who may reasonably be suspected of being liable to convey infectious disease.

6. That means should be provided for the detention and isolation of any vagrant found wandering in a public place, if reasonably suspected of being liable to convey infectious disease.

7. That the local authority should have full power to require the disinfection of the person and clothes of any person in a common lodging-house or casual ward, whether infected or exposed to infection.

8. That arrangements should be made by which the occurrence of infectious disease in common lodging-houses or casual wards should be made known by the local authority of the district to the local authorities of other districts.

9. That local authorities should be empowered to require the vaccination or re.vaccination of persons in common lodging-houses or casual wards who are exposed to the infection of small-pox.

These precautions are all no doubt good in themselves, but some are perhaps rather impracticable. Judging from my own experience, if we had the power which resolution 9 would give there would not be any great difficulty in dealing with smallpox. Resolutions 2, 5 and 7 would also be a considerable help in preventing the diffusion of this disease.

I am glad to be able to say that as regards the casual wards of the workhouse all precautions are taken.

BLACKBURN.

Registration Sub-Districts.

Map shewing Deaths from Diarrhœa, marked thus •

DUGHAM, LITHO., BLACKBURN

DIARRHŒA.

There were 88 deaths from Diarrhœa, compared with 287 in 1893. This enormous decrease was, no doubt, due greatly to the mildness of the summer. The deaths were distributed fairly uniformly all over the town-

ACUTE LUNG DISEASES

(other than Phthisis.)

There were only 484 deaths from acute lung disease, compared with 672 in 1893, or a death-rate of 3·8, compared with 5·4 in 1893.

TUBERCULOSIS.

There were 243 deaths from Tuberculosis, compared with 276 last year.

TABLE XXII.

Deaths from Tuberculosis for five years.

	1894		1893		1892		1891		1890	
	Deaths	Death rate	Deaths	Death rate	Deaths	Death rate	Deaths	Death rate.	Death	Death Rate
General Tuber'losis	30	0·23	35	0·28	26	0·21	18	0·15½	12	0·10
Tabes Mesenterica	40	0·31	80	0·64	61	0·49	54	0·44	51	0·42
Acute Hydrocept-alus & Tuber-cular Meningitis	25	0·19	25	0·20	32	0·26	24	0·2	21	0·17
Phthisis.....	148	1·17	134	0·1	132	1·0	163	1·35	214	1·8
Other Forms	—	—	2	0·001	—	—	—	—	4	0·003
	243	1 92	276	2·2	251	2·0	259	2·14	302	2·5

It is satisfactory to observe that these deaths have been fewer in 1894 than in any previous year. The death-rate from phthisis has, however, risen slightly.

Details as to phthisis in the wards, and the years since 1881, are given in the tables. I have pointed out that phthisis is perhaps of all diseases the most preventable. A great deal has been done in the past towards its prevention by improving generally the conditions under which people live. A question which is now exciting great interest is shall it be included amongst the notifiable diseases. Those who oppose its inclusion apparently do so on two grounds (1) that phthisis does not spread directly from person to person. (2) That notification would have an unnecessarily alarmist effect, and would be detrimental to the patients themselves Although there must be other very important conditions which determine infection there can be no doubt that one person can directly infect another. The infective material can very easily be dealt with, for it is not until the sputum becomes dry that the air is polluted and the poison inhaled. There is, I think, no reason to suppose that notification would produce any great scare. The special danger and the ease with which it can be avoided, would be readily explained.

At the present time the houses in which persons die of consumption are being disinfected, and instructions are issued informing persons how the dangers of infection can be avoided. It is very difficult, however, at present to give these instructions where they are required. Infection through food is dealt with in the report of the Royal Commission on Tuberculosis, a brief summary of which I give under the heading of meat inspection.

OTHER MATTERS AFFECTING THE HEALTH OF THE TOWN.

The influence of Occupation on Health.

On this subject I merely continue Tables which have been published in previous reports. It has frequently been pointed out that the numbers dealt with here are small, and that they must be continued for some years before reliable statistics can be obtained. I therefore give last years figures separately, and also combine them with the five previous years. The figures of last year are very much in accordance with those of former years. They seem to show the healthiness of weaving for young persons. The extraordinary rise of death rates at the higher age periods is somewhat difficult to explain. The proper ventilation of weaving sheds has undoubtedly proved to be a great benefit to the workpeople, and it might very advantageously be extended in some form or another to most other parts of the mill.

DEATHS DURING 1894.

Age Periods.	Weavers.	Spinners	Winders Warpers etc.	Card Room Hands.	Other Cotton.	Borough
15 to 25	47	6	11	...	5	112
25 „ 35	35	5	16	4	3	130
35 „ 45	16	4	10	2	4	171
45 „ 55	14	10	5	2	2	224
55 „ 65	13	4	5	...	7	242
65 upds.	23	8	10	2	8	327

DEATH RATES FOR 1894.

Age Periods.	Weavers.	Spinners.	Winders and Warpers, etc.	Card Room Hands.	Other Cotton	Borough.
15 to 25	4·6	7·7	4·8	...	9·2	4·7
25 „ 35	6·3	6·2	10·4	6·8	4·7	6·5
35 „ 45	6·0	8·2	11·5	5·4	8·0	11·9
45 „ 55	11·1	46·2	12·9	10·8	6·7	22·2
55 „ 65	29·8	27·5	35·4	...	56·9	40·0
65 upwds.	180·4	173·9	217·3	153·8	266·6	92·8

This years figures like previous years show that the death-rates of weavers are lower at every age period than those of spinners, and that with the exception of one period (over 65) they are lower than those of the rest of the borough.

DEATHS DURING 1889, 1890, 1891, 1892, 1893, 1894.

Age Periods.	Weavers.	Spinners.	Winders and Warpers, etc.	Card room hands	Other Cotton	Borough.
15 to 25	262	33	70	16	20	764
25 to 35	166	37	74	26	22	908
35 to 45	165	44	61	28	31	1289
45 to 55	110	41	48	29	32	1457
55 to 65	152	56	36	14	57	1812
65 & upwards	141	70	63	15	51	2356

DEATH RATES FOR 1889, 1890, 1891, 1892, 1893, 1894.

Age Periods.	Weavers	Spinners.	Winders and Warpers, etc.	Card room hands	Other Cotton	Borough.
15 to 25	4·3	7·1	5·1	5·1	6·1	5·3
25 to 35	5·0	7·3	8·0	7·4	5·8	7·6
35 to 45	10·4	14·6	11·7	12·6	10·3	15·0
45 to 55	14 6	31·6	20·6	26·2	17·9	24·1
55 to 65	58·1	64·3	42·5	40·1	77·2	50·0
65 & upwards	188 0	253·6	228·2	192·3	283·3	111·5

PHTHISIS, 1889—1894.

DEATHS.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton	Borough.
15 to 25	71	9	22	5	3	201
25 „ 35	59	11	33	7	6	157
35 „ 45	28	9	9	8	9	196
45 „ 55	13	4	1	6	4	120
55 „ 65	10	0	1	0	1	48
65 upwds.	0	1	2	0	1	11
Total.....	181	34	68	26	24	733

DEATH RATES.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton	Borough.
15 to 25	1·1	1·9	1·5	1·6	0·9	1·4
25 „ 35	1·7	2·2	3·5	2 0	1·5	1·3
35 „ 45	1·7	3·0	1·7	3·6	3·0	2·2
45 „ 55	1·7	3·0	0·4	5·0	2·2	1·9
55 „ 66	3·8	0·0	1·1	0·0	1·3	1·3
65 upwds.	0·0	3·6	7·2	0·0	5·5	0.5
All ages over 15	1·5	2·2	2·1	2·5	1·9	1·5

Bronchitis and Pneumonia, 1889-1894.

DEATHS.

Age Periods.	Weavers.	Spinners.	Winders and Warpers, etc.	Card room hands.	Other Cotton	Borough.
15 to 25	54	6	10	1	6	155
25 „ 35	30	14	4	4	6	202
35 „ 45	44	10	19	5	9	374
45 „ 55	47	19	21	12	11	519
55 „ 65	57	31	10	5	21	708
65 & upwards	55	22	19	8	18	790
Total...	287	102	83	35	71	2748

DEATH RATES.

Age Periods.	Weavers.	Spinners.	Winders and Warpers, etc.	Card room hands.	Other Cotton	Borough.
15 to 25	0·9	1·3	0·7	0·3	1·8	1·0
25 „ 35	0·9	2·9	0·4	1·1	1·5	1·7
35 „ 45	2·8	3·3	3·6	2·2	3·0	4·3
45 „ 55	6·2	14·6	9·0	10·8	6·1	8·6
55 „ 65	21·8	35·6	11·8	14·3	28·4	19·5
65 & upwards	73·3	79·7	68·8	102·5	100·0	37 4
	2·3	6·8	2·6	3·4	5·5	5·9

FEVER HOSPITAL.

The New Fever Hospital was opened on 25th July, 1895. Now, for the first time in Blackburn, isolation is being provided for Scarlet Fever, Typhoid Fever, and Dipththeria. In past times not only was there no isolation for these diseases, but even admission to the Workhouse was refused. The result was in certain cases a most deplorable state of affairs.

The Hospital consists of three blocks for patients and one for adminstration. The laundry, lodge, out-bathing place, mortuary, and disinfector are also separate buildings. The wards are all one-storied buildings, and the walls and floors are so contructed as to allow no accumulation of dust.

The Scarlet Fever pavilion consists of two large wards, two private wards, and a reception ward, together with the nurses' room and scullery. It is built nominally to accommodate 29 patients, but on account of the system of ventilation, which can be regulated as required, there will be no difficulty in putting, if necessary, as many as 50 patients in this block. The cubic space allowed per patient is 2,000 feet. The system of ventilation in this pavilion is that of forcing in warmed, filtered and, if necessary, moistened air above and extracting air from below. The apparatus was supplied by the Sturtevant Company. From numerous tests it has been found that 10,000 cubic feet of air per hour per bed can be forced into the ward, but at this speed the noise of the fan is objectionable.

The private wards are simply for single patients, and the reception ward is mostly used for receiving and bathing patients before admission.

The Typhoid pavilion consists of two wards, one for 6 patients and another for 4, and a small private ward intended for 2 patients. The total number of Typhoid patients that can be accommodated is 12. There is no special means of ventilation in

these wards beyond a ventilating stove, which, on testing, was found to admit about 5,000 cubic feet of air per hour.

The isolation block consists of three wards, each for a single patient, and a nurses' room. It is so arranged that the nurse has to pass through the open air in going from one ward to another, and consequently there is no direct communication between any two wards. The necessity for this is due to the fact that there may be at times different diseases isolated in these wards.

The adminstrative block which contains medical officer's, matron's, nurses', and servants rooms, dispensary, and stores is built larger than is required in view of any possible future extension.

The disinfector is one supplied by Messrs. Goddard, Massey and Warner, and the disinfecting agent is super-heated steam. It is used now for the whole town.

The out-bathing place is used for discharging all Scarlet Fever patients. It is necessary to discharge them from a room which is not infected. This block is often used also for persons who have been exposed to infection in the town and wish to be disinfected.

After the Hospital was officially opened it was left open to the public for a fortnight, and a large number of people availed themselves of the opportunity of seeing the buildings. The Hospital was not ready for the reception of patients until September 1st.

	Admitted from Sept. 1st to Dec. 31st.	Recovered.	Dead.	Remaining in Hospital on Dec. 31st.	Average number of days in Hospital of those discharged 1894.	Percentage removed of total cases notified.	Complications.
Scarlet Fever.....	17	9	0	8	46	28·3	Otorrhœa in one case. Endocarditis do.
Typhoid Fever ...	1	0	1	0	6	3·1	Perforation of bowels.
Diphtheria.....	6	3	1*	2	16	28·5	Diptheritic Paralysis in one case. Albuminuria, two cases
Total.....	24	12	2	10	34·5	21·2	

* Only lived two hours after admission.

The average number of patients in the Hospital during 1894 was seven.

There having been no hospital for these diseases in the town before there was at first considerable objection on the part of the parents to their children being removed. This is to some extent disappearing and no doubt will continue to do so as the many advantages of the hospital become more apparent. Its influence must not be gauged simply by the percentage of cases that have been removed. The isolation that we have been able to insist upon in those remaining at home has been much more satisfactory. It remains, however, to be seen how we shall be able to cope with an epidemic such as the one that visited the town in 1878, and again in 1887, 1888, and 1889.

COMMON LODGING-HOUSES.

The inspection of these houses has been more frequent than usual on account of small pox which was prevalent in many of the adjacent towns, and which was introduced several times into Blackburn. Although they still leave much to be desired, they have been considerably improved in condition during the year. The advantages of a properly built and well managed municipal lodging-house have again been pointed out, and the matter is now under your consideration.

COUNTY BOROUGH OF BLACKBURN.

BYE-LAWS

Made by the Mayor, Aldermen, and Burgesses of the Borough of Blackburn, with respect to

HOUSES LET IN LODGINGS,

Or occupied by Members of more than One Family.

IN THE BOROUGH OF BLACKBURN.

Interpretation of terms.

1. In these bye-laws, unless the context otherwise requires, the following words and expressions have the meanings hereinafter respectively assigned to them ; that is to say :—

"Sanitary Authority" means the Mayor, Alderman, and Burgesses of the Borough of Blackburn, acting by the Council as the Urban Sanitary Authority.

'Lodging-house" means a house or part of a house which is let in lodgings or occupied by members of more than one family :

"Landlord," in relation to a house or part of a house which is let in lodgings or occupied by members of more than one family, means the lodging-house keeper or the person (whatever may be the nature or extent of his interest in the premises) by whom or on whose behalf such house or part of a house is let in lodgings or for occupation by members of more than one family, or who for the time being receives, or is entitled to receive, the profits arising from such letting :

"Lodger," in relation to a house or part of a house which is let in lodgings or occupied by members of more than one family, means a person to whom any room or rooms in such house or part of a house may have been let as a lodging or for his use and occupation.

Exempted houses.

2. In any one of the several cases hereinafter specified, a lodging-house shall be exempt from the operation of these bye-laws ; that is to say :—

(*a*) Where for the purposes of any rate for the relief of the poor the rateable value of the house exceeds £40 os. od., and the rent or charge payable by each lodger, and exclusive of any charge for the use by such lodger of any furniture shall be such that the amount accruing due in any term shall be at the rate or in the proportion of not less than 4s. od. *per week* ;

(*b*) Where for the purposes of any rate for the relief of the poor the rateable value of the house exceeds £40 os. od., and the rent or charge payable by each lodger, and inclusive of any charge for the use by such lodger of any furniture, shall be such that the amount accruing due in any term shall be at the rate or in the proportion of not less than 6s. od. *per week* :

For fixing the number of persons who may occupy a house or part of a house which is let in lodgings or occupied by members of more than one family :

For the registration of houses so let or occupied :

For the inspection of such houses :

For enforcing the provision of privy accommodation for such houses, and for promoting cleanliness and ventilation in such houses :

For the cleansing and lime-washing at stated times of the premises, and for the paving of the courts and courtyards thereof :

For the giving of notices, and the taking of precautions in case of any infectious disease.

3. The landlord of a lodging-house shall not knowingly cause or suffer a greater number of persons than will admit of the provision of *four hundred cubic feet* of free air space for each person of an age exceeding *ten years*, and of *two hundred cubic feet* of free air space for each person of an age not exceeding *ten years* to occupy at any one time as a sleeping apartment, a room which is used exclusively for that purpose.

4. The landlord of a lodging house shall not knowingly cause or suffer a greater number of persons than will admit of the provision of *five hundred cubic feet* of free air space for each person of an age exceeding *ten years*, and of *two hundred and fifty cubic feet* of free air space for each person of an age not exceeding *ten years* to occupy, at any one time, as a sleeping apartment, a room which is not used exclusively for that purpose.

5. A lodger in a lodging-house shall not knowingly cause or suffer a greater number of persons than will admit of the provision of *four hundred cubic feet* of free air space for each person of an age exceeding *ten years*, and of *two hundred cubic feet* of free

air space for each person of an age not exceeding *ten years* to occupy, at any one time, as a sleeping apartment, a room which is used exclusively for that purpose, and which has been let to such lodger.

6. A lodger in a lodging-house shall not knowingly cause or suffer a greater number of persons than will admit of the provision of *five hundred cubic feet* of free air space for each person of an age exceeding *ten years*, and of *two hundred and fifty cubic feet* of free air space for each person of an age not exceeding *ten years* to occupy, at any one time, as a sleeping apartment, a room which is not used exclusively for that purpose, and which has been let to such lodger.

7. The landlord of a lodging-house within a period of seven days after he shall have been required by a notice in writing, signed by the Clerk to the Sanitary Authority, and duly served upon or delivered to such landlord, to supply the information necessary for the registration of such house by the Sanitary Authority at the office of the Medical Officer of Health, a true statement of the true particulars with respect to such house; that is to say:—

(*a*) The total number of rooms in the house:

(*b*) The total number of rooms let in lodgings or occupied by members of more than one family:

(*c*) The manner and use of each room:

(*d*) The number, age, and sex of the occupants of each room used for sleeping:

(*e*) The Christian name and surname of the lessee of each room; and

(*f*) The amount of rent or charge payable by each lessee.

8. In every case where the landlord of a lodging-house occupies or resides in any part of the premises, or retains a general possession or control of the premises, such landlord shall at all times when required by the Medical Officer of Health, the Inspector of Nuisances, or the Surveyor of the Sanitary Authority, afford any such officer free access to the interior of the premises for the purposes of inspection.

9. In every case where the landlord of a lodging-house does not occupy or reside in any part of the premises, or retain a general possession or control of the premises, every lodger who is entitled to have or to exercise the control of the outer door of the premises shall at all times when required by the Medical Officer of Health, the Inspector of Nuisances, or the Surveyor of the Sanitary Authority, afford any such officer free access to the interior of the premises for the purpose of inspection.

10. Every lodger in a lodging-house shall at all times when required by the Medical Officer of Health, the Inspector of Nuisances, or the Surveyor of the Sanitary Authority, afford any such officer free access for the purpose of inspection to the interior of any room or rooms which may have been let to such lodger.

11. In every case where the Medical Officer of Health, the Inspector of Nuisances, or the Surveyor of the Sanitary Authority has, for the purpose of inspection, obtained access to the interior of a lodging-house or to the interior of any room or rooms in such house, a person shall not wilfully obstruct any such officer in the inspection of any part of the premises, or, without reasonable excuse, neglect or refuse, when required by any such officer, to render him such assistance as may be reasonably necessary for the purpose of such inspection.

12. The landlord of a lodging-house shall provide privy accommodation for such house by means of a water-closet or water-closets.

He shall provide such accommodation so that the number of water-closets, in relation to the greatest number of persons who, subject to the restrictions imposed by any bye-law in that behalf, may, at any one time, occupy rooms in the house as sleeping apartments, shall be in the proportion of not less than one water-closet to every *twelve* persons.

13. In every case where for the purpose of providing privy accommodation for a lodging-house in pursuance of the requirements of any bye-law in that behalf, the construction of a new water-closet is neeessary, and where such construction, so far as regards the several details hereinafter specified, is not already the subject of regulation by any statute or bye-law in force within the district, the landlord shall construct such water-closet in accordance with the following rules :—

(i.) If the water-closet is intended to be within the house he shall construct such water-closet in such a position that one of its sides at least shall be an external wall :

(ii.) He shall construct in one of the walls of the water-closet, whether the situation of such water-closet is or is not within the house, a window of not less dimensions than *two feet* by *one foot*, exclusive of the frame, and opening directly into the external air :

He shall, in addition to such window, cause the water-closet to be provided with adequate means of constant ventilation by at least one air-brick built in an external wall of such water-closet, or by an air shaft, or by some other effectual method or appliance :

(iii.) He shall furnish the water-closet with a separate cistern, or flushing-box of adequate capacity, which shall be so constructed, fitted, and placed as to admit of the supply of water for use in such water-closet without any direct con-

nection between any service pipe upon the premises and any part of the apparatus of such water-closet, other than such cistern or flushing-box :

He shall furnish the water-closet with a suitable apparatus for the effectual application of water to any pan, basin, or other receptacle with which such apparatus may be connected and used, and for the effectual flushing and cleansing of such pan, basin, or other receptacle, and for the prompt and effectual removal therefrom of any solid or liquid filth which may from time to time be deposited therein.

He shall furnish the water-closet with a pan, basin, or other suitable receptacle of non-absorbent material, and of such shape, of such capacity, and of such mode of construction as to receive and contain a sufficient quantity of water, and to allow all filth which may from time to time be deposited in such pan, basin, or receptacle to fall free of the sides thereof, and directly into the water received and contained in such pan, basin, or receptacle :

He shall not construct or fix under such pan, basin, or receptacle any "container" or other similar fitting :

He shall not construct or fix in or in connection with the water-closet apparatus any trap of the kind known as a "D trap."

14. In every case where a lodger in a lodging-house is entitled to the exclusive use of any court, courtyard, area, or other open space within the curtilage of the premises, such lodger shall cause such court, courtyard, area, or other open space to be thoroughly cleansed from time to time as often as may be requisite for the purpose of keeping the same in a clean and wholesome condition.

15. In every case where two or more lodgers in a lodging-house are entitled to the use in common of any court, courtyard, area, or other open space within the curtilage of the premises, the landlord shall cause such court, courtyard, area, or other open space to be thoroughly cleansed from time to time as often as may be requisite for the purpose of keeping the same in a clean and wholesome condition.

16. The landlord of a lodging-house shall cause every part of the structure of every water-closet belonging to such house to be maintained at all times in good order, and every part of the apparatus of such water-closet, and every drain or means of drainage with which such water-closet may communicate to be maintained at all times in good order and efficient action.

17. The landlord of a lodging-house shall cause every part of the structure of every privy belonging to such house and every receptacle for filth provided or used in or in connection with such privy to be maintained at all times in good order.

18. In every case where a lodger in a lodging-house is entitled to the exclusive use of any water-closet, or privy belonging to such house, such lodger shall cause the pan, seat, floor, and walls of such water-closet, and the seat, floor, and walls of such privy to be thoroughly cleansed from time to time as often as may be necessary for the purpose of keeping such pan, seat, floor, and walls in a clean and wholesome condition.

19. In every case where two or more lodgers in a lodging-house are entitled to the use in common of any water-closet, or privy belonging to such house the landlord shall cause the pan, seat, floor, and walls of such water-closet, and the seat, floor, and walls of such privy to be thoroughly cleansed from time to time as often as may be necessary for the purpose of keeping such pan, seat, floor, and walls in a clean and wholesome condition.

20. In every case where a lodger in a lodging-house is entitled to the exclusive use of any privy belonging to such house,

such lodger shall cause every receptacle for filth provided or used in or in connexion with such privy to be maintained at all times in a wholesome condition.

21. In every case where two or more lodgers in a lodging-house are entitled to the use in common of any privy belonging to such house, the landlord shall cause every receptacle for filth provided or used in or in connexion with such privy to be maintained at all times in a wholesome condition.

22. The landlord of a lodging-house shall cause every part of the structure of every ashpit belonging to such house to be maintained at all times in good order.

23. In every case where a lodger in a lodging-house is entitled to the exclusive use of any ashpit belonging to such house, such lodger shall cause such ashpit to be kept at all times in a wholesome condition.

24. In every case where two or more lodgers in a lodging-house are entitled to the use in common of any ashpit belonging to such house, the landlord shall cause such ashpit to be kept at all times in a wholesome condition.

25. A lodger in a lodging-house, or an occupant of any room therein, shall not throw any filth or wet refuse into any ashpit belonging to such house and constructed and adapted for use only as a receptacle for ashes, dust, and dry refuse.

26. Every lodger in a lodging-house shall cause the floor of every room which has been let to him to be thoroughly swept once at least in *every day*, and to be thoroughly washed once at least in *every week*.

27. Every lodger in a lodging-house shall cause every window, every fixture or fitting of wood, stone, or metal, and every painted surface in every room which has been let to him to be thoroughly cleansed from time to time as often as may be requisite.

28. Every lodger in a lodging-house shall cause all solid or liquid filth or refuse to be removed once at least in *every day* from every room which has been let to him, and shall once at least in *every day* cause every vessel, utensil, or other receptacle for such filth or refuse to be thoroughly cleansed.

29. In every case where a lodger in a lodging-house is entitled to the exclusive use of any staircase, landing, or passage in such house, such lodger shall cause every part of such staircase, landing, or passage to be thoroughly cleansed from time to time as often as may be requisite.

30. In every case where two or more lodgers in a lodging-house are entitled to the use in common of any staircase, landing, or passage in such house, the landlord shall cause every part of such staircase, landing, or passage to be thoroughly cleansed from time to time as often as may be requisite.

31. A lodger in a lodging-house shall not cause or suffer any animal to be kept in any room which has been let to such lodger or elsewhere upon the premises in such a manner as to render the condition of such rooms or premises filthy or unwholesome.

32. The landlord of a lodging-house shall cause all such means of ventilation as may be provided in or in connexion with any room or passage in such house and in or in connection with any water-closet, or privy belonging to such house to be maintained at all times in good order.

33. The landlord of a lodging-house shall, in the first week of the month of April in every year, cause every part of the premises to be cleansed.

He shall, at the same time, except in such cases as are hereinafter specified, cause every area, the interior surface of every ceiling and wall of every water-closet, earth-closet, privy or

belonging to the premises, and the interior surface of every ceiling and wall of every room, staircase, and passage in the house to be thoroughly washed with hot lime-wash.

Provided that the foregoing requirement with respect to the lime-washing of the internal surface of the walls of rooms, staircases, and passages shall not apply in any case where the internal surface of any such wall is painted, or where the material of or with which such surface is constructed or covered is such as to render the lime-washing thereof unsuitable or inexpedient, and where such surface is thoroughly cleansed, and the paint or other covering is renewed, if the renewal thereof be necessary for the purpose of keeping the premises in a cleanly and wholesome condition.

34. The landlord of a lodging-house shall cause every court and courtyard thereof to be properly paved with a hard durable and impervious pavement, evenly and closely laid upon a sufficient bed of good concrete and sloped to a properly constructed channel leading to a trapped gully grating, which shall so be constructed and placed as effectually to carry off all rain or waste water from such court or court yard.

He shall cause such pavement, channel, and grating to be kept at all times in good order and in proper repair.

35. Every lodger in a lodging-house shall, except in such cases as are hereinafter specified, cause every window of every room which has been let to him, and which is used as a sleeping apartment, to be opened and to be kept fully open for *one hour* at least in the forenoon and for *one hour* at least in the afternoon of every day :

Provided that such lodger shall not be required, in pursuance of this bye-law, to cause any such window to be opened or to be kept open at any time when the state of the weather is such as to

render it necessary that the window should be closed, or when any bed in any such room may be occupied by any person in consequence of sickness or of some other sufficient cause.

36. The landlord of a lodging-house, immediately after he shall have been informed, or shall have ascertained that any person in such house is ill of an infectious disease, shall give written notice thereof to the Medical Officer of Health of the Sanitary Authority.

37. In every case where a lodger in a lodging-house has been informed, or has ascertained, or has reasonable grounds for believing that an occupant of any room which has been let to such lodger is ill of an infectious disease, such lodger shall forthwith give written notice thereof to the landlord and to the Medical Officer of Health of the Sanitary Authority, and verbal or written notice thereof to every other lodger in such house.

38. In every case where, in pursuance of the statutory provision in that behalf, an order of a justice has been obtained for the removal from a lodging-house to a hospital, or other place for the reception of the sick, of a person who is suffering from any dangerous infectious disorder and is without proper lodging or accommodation, or lodged in a room occupied by more than one family, the landlord of such house, and the lodger to whom any room whereof such person may be an occupant has been let shall, on being informed of such order, forthwith take all such steps as may be requisite on the part of such landlord and of such lodger, respectively, to secure the safe and prompt removal of such person in compliance with such order, and shall in and about such removal, adopt all such precautions as, in accordance with any instructions which such landlord and such lodger, respectively, may receive from the Medical Officer of Health of the Sanitary Authority, may be most suitable for the circumstances of the case.

Penalties.

39. Every person who shall offend against any of the foregoing bye-laws shall be liable for every such offence to a penalty of Five Pounds, and in the case of a continuing offence to a further penalty of Forty Shillings for each day after written notice of the offence from the Sanitary Authority :

Provided, nevertheless, that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment as a penalty, of any sum less than the full amount of the penalty imposed by this bye-law.

The object of these bye-laws is to allow of stricter supervision of those houses which are sub-let to more than one family and which do not come under the law relating to common lodging-houses. It is in this class of house that overcrowding is so liable to occur, and generally speaking they require almost as much supervision as common lodging-houses. The extremely objectionable practice which was not uncommon of fastening the doorway communicating between the front and back portion of the house and practically making them into back to back houses, is, I am glad to say, being put a stop to.

SCHOOLS.

In my reports I have frequently expressed the opinion that the better ventilation of schools is one of the most urgently needed reforms. Some of the schools in the town have certainly been improved in this respect. In the great majority there has been no considerable improvement beyond the fact that open windows are more common. The provision of cloak rooms has become more general, and is certainly a step in the right direction.

In the rules issued by the Education Department this year, with respect to the building of new schools, there are more definite and precise rules laid down. I quote here the paragraph which relates to ventilation :—

" Apart from open windows and doors, there should be provision for copious inlet of fresh air ; also for outlet of foul air at the highest point of the room ; the best way of providing the latter is to build to each room a separate air chimney, carried up the same stack with smoke flues. An outlet should have motive power by heat or exhaust, otherwise it will frequently act as a cold inlet. The principal point in all ventilation is to prevent stagnant air, particular expedients are only subsidiary to this main direction. Inlets should provide a minimum of 2½ square inches per child, and outlets a minimum of 2 inches."

Although in many ways these directions are no doubt excellent, it seems a pity that with regard to new schools more stringent regulations are not laid down. The inlet space of 2½ inches is totally inadequate for preventing the air of schools from becoming very foul indeed. With a cubic space of from 80-120 feet per child it is generally allowed that the ventilation can only be at all perfect by the aid of mechanical power, and that the system must be that of forcing warm air into the room. This system has not come generally into use on account of expense and the super-

vision that it requires. If then natural ventilation is relied upon it should be carried out as perfectly as possible. The minimum inlet space I think that should be allowed is from 10-20 inches per child. The heating apparatus, which in most schools consists of hot pipes, should be made to heat the incoming air. The extra expense in construction is almost nothing, but the heating surface of pipes, and the amount of coal used, would have to be increased on account of the more rapid change of air. Because of the tubes that are necessary to give an upward direction to the incoming air the friction is very considerable, and the amount of air introduced is much less than one would imagine. A very great fault in many of the inlets for air in school rooms is that there is no provision for cleansing them. The attention of teachers is called to the fact that the rooms should be flushed with fresh air every 2 hours. This is a very important instruction, but surely it is not difficult, and certainly it is most desirable that school rooms should be flushed every hour with fresh air. It is extremely desirable, too, that windows shall be so constructed that the rooms can be properly flushed with air. Schools are continually being built in which windows open to such a small extent that changing the air is a very slow process.

The spread of Scarlet Fever through schools has been shown time after time, and the influence of schools in the spread of whooping cough and measles is seen in every epidemic. It is generally thought that schools are frequently the means of propagating diphtheria, and of this there was a well marked instance in Blackburn last year. It is however principally with regard to tubercular diseases that this matter is of so much importance. It has been proved most conclusively that no insanitary condition pre-disposes so much to phthisis as an atmosphere containing respiratory impurities.

I am glad to be able to report that the Health Committee have so far taken this matter in hand, as to order in a certain case

that the necessary proceedings be taken in order to remedy a nuisance produced by bad ventilation of a school.

Conversion of Middens to Water-Closets.

During the year 130 middens have been converted to water-closets. There are at present :—

Water Closets	7,793.
Middens	4,016.
Tubs	10,887.

One of the greatest defects in the sanitary condition of the town is the large number of privies which still exist. Every year a few are converted to water-closets. The progress has, however, of late become very slow. As I mentioned in my last report untrapped middens are now almost all converted. I do not intend entering again into details with regard to various ways in which these accumulations of filth are injurious to health. It is well, however, to remember that it is very common for a space equal to about $\frac{1}{10}$ of the yard space and sometimes considerably more to be occupied by the midden.

The larger a town grows the more important this question becomes, for the danger becomes greater as the oxidising properties of the air decreases. Pollution of the soil, too, is far more dangerous in the town than in the country where it seldom does much harm except by contaminating water. The organic matter of the soil is got rid of by the growth of organisms which require a constant supply of air. The circulation of air is caused by variation of temperatures, variation of level of ground-water, and by solution of air in rain and displacement by rain. It is the policy now in this town, and no doubt in many ways a good one, to lay impervious pavement. This prevents circulation of ground-air and a proper supply of oxygen to oxidise the organic matter in the soil. When sufficient oxygen is not supplied putrifaction goes on instead of oxidation, with escape of noxious gases. Unfortunately in Blackburn the houses are not laid on an impervious bed. The

one place of all others at which ground-air has a free escape is at the base of the house. This escape is aided considerably by the aspiration of the house fires. It is probably advisable in every way that streets, yards, etc., should have an impervious surface but it becomes much more important then to see that there are no means of soil pollution such as leaking drains and leaking middens. It also becomes extremely important that the land on which houses are built should be covered by some impervious material.

REFUSE DESTROYED AT DESTRUCTOR DURING YEAR 1894.

Month Ending.	Midden Refuse.			Ashpit Refuse.			Fish Carcases, Market Refuse, &c.			Total.		
	Tons.	Cwts.	Qrs.	Tons.	Cwts.	Qrs.	Tons.	Cwts.	Qrs.	Tons.	Cwts.	Qrs.
January 27...	631	8	0	301	14	0	61	5	0	994	7	0
February 24	751	11	0	261	6	0	48	17	0	1061	14	0
March 31 ...	941	2	0	261	12	0	75	11	2	1278	5	2
April 28.....	804	17	0	143	16	0	69	16	2	1018	9	2
May 26	675	14	0	219	15	0	47	3	2	942	12	0
June 30	904	0	0	240	19	0	44	9	0	1189	8	0
July 28	751	10	0	148	2	0	60	13	2	960	5	2
August 25 ...	614	13	0	190	7	0	52	14	0	857	14	0
September 29	875	17	0	230	3	0	61	8	2	1167	8	2
October 27...	753	13	0	129	2	0	63	9	2	946	4	2
November 24	724	2	0	191	17	0	65	15	2	981	14	2
December 29	918	10	0	160	17	0	87	15	2	1167	2	2
	9346	17	0	2479	10	0	738	19	0	12565	6	0

REFUSE TIPPED :—

Midden Refuse—5,174 tons. Ashpit Refuse—28,898 tons.

Wet Ashpits Emptied	.....	27,469
Dry „ „	.....	25,697
Execreta Tubs „	.....	624,255
Ash Tubs „	.....	321,990

It will be noticed from the preceding table that a very large quantity of refuse matter was tipped in Blackburn during 1894. It is satisfactory, however, to be able to state that sometime within a few months tipping in the town will cease.

The emptying of middens has gone on with more regularity during the year. The number of complaints received at the Health Office concerning them is now small. It is found that on an average they are emptied about once in twelve weeks. Although this cannot be considered satisfactory, it is an improvement. The work is now done in districts, and the town is gone through systematically.

The excreta tubs have been emptied with regularity, judging by the small number of complaints that have been received. There are still, however, about 1,000 tubs weekly which are replaced without being cleansed. This is a practice which should certainly be discontinued. It would be advisable too to disinfect as well as cleanse the tubs. As I have pointed out under the heading of Typhoid Fever, there is undoubtedly a danger of conveying the disease by excreta tubs, and this should be minimised as much as possible.

The emptying of ash tubs has perhaps of all branches of scavenging work been done with the least regularity. These tubs should be emptied systematically every fortnight, and in the centre of the town, where almost all the space is built on, daily removal would be preferable.

A very important recommendation which has been made by your Committee to the Scavenging Committee is that all streets should be watered before being swept in dry weather. This has to some extent only been done. It is very doubtful whether sweeping in dry weather without watering does not do more harm than good. The amount of refuse actually removed is very small, and the atmosphere is badly polluted for some time afterwards.

OPEN SPACES.

This matter is now being considered by the Health Committee, and it is hoped that some definite action will be taken during the next year. The advantages of small open spaces in or near crowded districts are very great, and have frequently been pointed out. As years pass by the difficulties in the way of providing these spaces increases.

BUILDING BYE-LAWS.

Another year has passed and still no building bye-laws are in operation. A code of bye-laws has, however, been ordered to be prepared and submitted.

In previous reports I have pointed out some of the matters which should be regulated by bye-laws. It is to the interest not only of the inhabitants, but of builders and property owners generally, that a distinct understanding should be come to as to what will be required in new property. It is possible now to put up buildings without infringing any regulation which might be objected to under the Public Health Act on completion.

INSANITARY PROPERTY.

1, 2, 4, 6, 8, 10 *and* 12 *Copy Street*; 4, 6, 8 *and* 10 *Shackleton Street;* 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 *Dock Street;* 75, 77, 79, 81 *Cleaver Street.* These houses were closed early in year. They have since been altered satisfactorily and opened.

1 *and* 2 *Harrison's Yard;* 6 *and* 8 *Smithies Street.* These were cellar dwellings. They were ordered to be closed.

58, 60 *and* 62 *Grimshaw Park;* 1 *and* 3 *Mosley Street.* These houses were closed on account of general dilapidation. They have since been pulled down to make room for new property.

Three houses unnumbered behind 24 *Cannon Street.* These houses were closed and have since been ordered to be demolished.

56 *Pringle Street.* This house was closed on account of dampness and reopened when the dampness was remedied.

30, 32, 34, 36, 38, 40, 42, 44 *Sharples Street;* 29, 30, 33, 34, 39, 40 *Jack Croft;* 115, 117 *Chapel Street;* 113, 115, 117 *Penny Street;* 8 *Back Blakey Street;* 10 *Eanam* and 2 *Eanam Old Road;* 25, 27 *Thomas Street;* house in No. 1 court *Witton.* Theses houses were closed on account of general dilapidation.

87 *King Street.* This house was closed on account of want of light and ventilation.

56, 58 *Blakey Moor;* 78, 82 *Moor Street;* 1 and 5 *Back Moor Street;* 5, 7 *Jardine Street;* 35, 37 *Moor Street.* These were back-to-back houses. These were ordered to be altered satisfactorily, and as the work was not done they were closed. They have since been opened.

21, 21a *Brunswick Street.* These were back-to-back houses They were ordered to be altered satisfactorily, and as the work was not done they were closed.

WATER SUPPLY AND DOMESTIC FILTRATION.

The Corporation water has been substituted for the previous defective water supply in five houses. I have analysed samples of water from nine separate supplies, but have not had to take any action except in the above cases.

The Corporation water, although a wholesome water, contains a considerable amount of vegetable organic matter. The principal drawback is that the water has a distinctly yellow colour, and on this account people are induced to filter it. Filters,

whether domestic or otherwise, require very careful cleansing ; cleansing of a nature which most people do not understand. A charcoal filter for instance, which by the way is usually very objectionable, should be well roasted in a closed space. If a filter is not cleansed its pores become filled with decomposing matter, and organisms grow through into the filtered water. The water after passing through the filter often contains a vast number more organisms than before; in fact, sometimes they are multiplied thousands of times. I have myself seen filters in use which were adding enormously to the impurity of the water. Unfortunately the appearance of the water is improved in all these cases. It is then advisable either not to filter the water at all, or to use a porcelain high pressure filter of the Pasteur or Chamberland type. These filters are fitted on to the tap, and with ordinary attention will give an absolutely pure filtrate.

PRIVATE SLAUGHTER HOUSES AND MEAT INSPECTION.

There are 20 private slaughterhouses in Blackburn. In the Meat Inspector's report will be found the number of visits paid to them during the year. They necessarily make the inspection of meat difficult and incomplete.

The report of the Royal Commission appointed to enquire into "The effect of Food derived from Tuberculous Animals on Human Health" has just been issued. This report has been looked forward to with considerable interest by those who are responsible for meat inspection, and also by farmers and butchers. It is of sufficient importance to justify me in giving a brief summary of the results arrived at, and certain of the more important paragraphs word for word. It is not so much that new facts have been discovered, as that the whole matter has been set before the public in a more authoratative manner. The Commission employed experts to make experiments, and the subjects they

investigated were : (1) The effect upon the lower animals of food of tubercular origin. (2) The effect of cooking upon this food. (3) The means of diagnosing tuberculosis in animals during life.

The conclusions arrived at by the Commission were :—

(1)* That there is a real danger in the consumption of tuberculous matter whether in milk or meat.

(2)† That there is no danger in the sale of meat from carcases with localised tuberculosis if every part of tubercle be skilfully removed.

(3) That even in these cases there is some danger from the smearing of tuberculous matter on to the flesh intended for food ; and that there is a similar danger of smearing this matter on to the flesh of the next animal slaughtered.

(4) That cows will not transmit tuberculosis through their milk unless the udders are affected. If the udders are diseased the milk is very virulent.

(6) With regard to cooking (*a*) Meat : That ordinary methods of cooking will kill the bacilli on the surface but not in the deeper parts. Boiling is the most reliable and roasting before the fire the least reliable method of cooking. (*b*) Milk : That boiling, even for an instant, is sufficient to kill all bacilli.

A few important extracts.

¶ (48) "Dr. Martin would advocate as a principle that the operations of slaughter and dressing should be done under skilled supervision with the object of securing the removal and destruction

* The experiments proving this were most conclusive ; a very large percentage of animals treated with tuberculous matter whether by feeding or inoculation became affected.

† The experiments by which this statement is supported were not so conclusive, and the conclusion was inferred rather than directly proved. Still there seems to be great probability that the inference is correct.

of every part of a carcase that contained any tubercle whatever, and also the destruction of the whole carcase in cases where the animal was found to have advanced or generalized tuberculosis. For the rest Dr. Martin sees no objection to the sale of meat substance from carcases which have shown only localized tuberculosis, and from which every particle of tubercle has been skilfully removed : provided, always, that in every subsequent process of preparing the meat for sale due care be taken to guard the saleable portions from contamination by tuberculous matter."

(61) Dr. Martin writes : "The milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary. All the animals inoculated showed tuberculosis in its most rapid form."

(62) " Both Dr. Martin and Dr. Woodhead insist that no tuberculous animal of any kind should be allowed in a dairy."

(64) "It follows from the observations here recorded that it is of supreme importance to the consumers of milk that the existance of any tuberculous disease of the udder should be ascertained without delay. Now there is no difficulty whatever about recognising the presence of some abnormal condition in a cow's udder, and the presence of such condition—whatever it be—demands the judgment of a responsible expert should forthwith be obtained about its nature, unless, indeed, the owner prefers to slaughter the cow without delay. If the expert finds tubercle bacilli in the milk, the cow has dangerous tuberculosis of the udder. If he does not find them he may apply the further test of inoculating some susceptible animals with the milk, and thereby learn nature of the udder disease. By this test he will very rarely be misled. Obviously the cow must be in seclusion, and every particle of her milk must be treated as highly dangerous, during any delay that can be permitted for diagnostic purposes, and until the disease has been proved not to be tuberculosis."

In order to carry into practice the conclusions arrived at in this resport it would be necessary :—

(1) That there be a systematic inspection of all milch cows by competent persons, with immediate isolation of any suffering from any suspicious disease of the the udder. If on examination this disease turns out to be tuberculosis then the slaughter of the beast would necessarily follow. [This is already done by some of the large dairy companies in Denmark.]

(2) That slaughtering of cattle be only allowed in public slaughter-houses, and under very strict supervision.

(3) That a separate slaughter house be set apart for the slaughter of beasts suspected to have tuberculosis, and that the removal of tuberculosis matter be done by a competant person.

(4) That it be an offence to dress any beast affected with tuberculosis, however little, without calling the attention of the Inspector.

Anyone who has had any experience in this matter will recognise the great difficulties in the way of removing all traces of tuberculous matter from an animal. In order to make certain that this is efficiently done, it would be necessary to examine all the deep-seated glands, and to mutilate the carcase in a way the butchers would at present much object to. The right to cut the carcase in this way would have to be granted to the Inspector.

WORKSHOPS.

I give some analysis of air taken from the workshops, and a description of the means of ventilation of the rooms. The specimens of air were taken in the evenings, mostly when gas was burning. They show that the ventilation is far from satisfactory.

Number of Workshop.	Number of Work-people.	Number of Gases Burning.	Ventilation.	Windows on both sides.	No. of Window open at the time of visit.	Proportion of Window Space that opens.	Temperature of Room.	Co 2 per 1000 vol's.
1	6	2	None	No	None	½	71	3·9
2	13	11	,,	No	3	½	66	1·2
3	9	3	Fireplace partly blocked.	No	2	½	79	4·4
4	8	3	,,	No	None	½	82	3·5
5	52	17	Ventilator in ceiling 1′ square	Part of room	None	⅓	68	4 6
6	4	2	2 Ventilators in wall 9″ × 9″	No	2	⅓	64	1·9
7	7	3	1 Ventilator in ceiling 14″ × 14″	No	None	¼	82	2·0
8	2	1	Fireplace	No	None	½	64	2·1
9	5	1	,,	No	None	½	66	1·6
10	3	None	None	Yes	Skylight open	¼	70	1·1
11	57	41	None	Yes	9	⅓	73	1.1
12	5	None	None	Yes	None	⅓	68	1·0
13	5	2	None	No	Skylight open	⅓	68	1·3
14	3	1	None	Yes	3	⅓	72	0 64

The amount of space allowed in these workshops has been 250 cubic feet for many years. It is, however, not fixed by law, and can be changed by the Sanitary Authority when thought desirable. Considering that many of the buildings are so constructed as not to allow a free circulation of air, and comparatively few have any cross ventilation 300 cubic feet would certainly not be an excessive amount to enforce. There is then the difficulty of providing a proper system of ventilation. Every room differs somewhat in the amount of ventilation required, but the amount of inlet advised is generally 20 square inches per person. Where there is no fireplace some special outlet has to be provided. Unfortunately in tailors' work shops particularly, there is no proper means of warming. The warmth is derived from the hot irons, from the gas, and from the people themselves. Consequently in cold weather every inlet for fresh air is stopped up. Employers say that their workpeople will not have ventilation, which in their minds is synonymous with draughts. The only satisfactory means of dealing with this question is to fix a limit of impurity for the atmosphere of a workroom which must not be exceeded. It must be distinctly understood that satisfactory ventilation does not consist in the mere provision of fresh-air inlets and outlets. They must be arranged in such a manner and accompanied by sufficient warmth so as to prevent any cool draughts coming into contact with the workpeople and the temperature of the room being unduly lowered.

Bakehouses and Places where Food is Prepared.

The necessity for the stricter supervision of all places where food is prepared is daily becoming more evident. The community has certainly a right to expect that no insanitary premises will be allowed for the preparation of food. The question of underground bakehouses has caused considerable interest in many parts of the country. Although in this town bakehouses are not so common, there are about 32 bakehouses in cellars. Their unhealthiness is

partly due to the want of light and ventilation, and partly to the fact that the heated atmosphere of the bakehouse aspirates impure ground air from the surrounding polluted soil. There can as a rule be no ventilation except near the roof, and this is generally on a level with the surface outside, and in consequence receives very impure air.

Professor Klein and Dr. Harris have recently made a report of their investigations into the manufacture of ice-cream. The report shows how much we need special regulations for this branch of food preparation. Milk is such an excellent medium for the growth of bacteria that extreme cleanliness is required in its manipulation. In the preparation of other foods, although the danger may not be so great, cleanliness is very necessary. It should be compulsory for every place where food is prepared for sale to be registered and to conform to certain sanitary conditions.

WORKSHOPS.

Trades.	No. of Workshops.	No. of Workrooms.	No. of Employees at time of Inspector's Visit.			No of Visits.
			Males	Females	Total	
Tailors	60	87	66	53	319	556
Milliners and Dressmakers	82	93	...	408	408	741
Hosiers and Underclothiers	10	14	...	97	97	89
Stocking Knitters	7	8	3	14	17	65
Cabinet Makers & Upholsterers	17	34	86	...	86	159
Joiners	19	25	73	...	73	121
Brushmakers	9	19	31	..	31	75
Bass Dressers	1	4	6	...	6	5
Tinners	10	15	49	...	49	81
Saddlers	10	14	36	...	36	132
Paper Bag Makers	2	6	3	19	22	17
Picture Framers	6	16	23	...	23	58
Cloggers and Shoemakers	52	59	116	...	116	473
Cotton Waste Dealers	3	10	6	3	9	23
Weighing Machine Makers	2	2	9	...	9	15
Coopers	2	2	8	...	8	17
Chain Makers	1	1	2	...	2	7
Clog Sole Makers	2	2	4	...	4	15
Curriers and Leather Dressers	3	10	11	3	14	29
Wire Workers	1	2	6	...	6	8
Chair Makers	2	5	6	...	6	17
Coach Builders & Coach Painters	5	10	58	...	58	58
Skip Makers	1	2	5	...	5	9
Wheelwrights	4	5	12	...	12	35
Herb Beer Makers	6	13	22	3	25	59
	317	458	841	600	1441	2864

WORKSHOPS.

Total number of visits	2864
No. of Rooms	458
No. of Workshops in which the space was less than 250 cubic feet per person	10
No. of Rooms in which the space was less than 250 cubic feet per person	15
No. found dirty	33
No. with defective ventilation of drains	21
No. with closets out of order	13
No. separate closet accommodation for the sexes	15
Gullies made up	35
Notices served	25
Defective slop pipes	2
Smoke test applied	1

BAKEHOUSES.

No. Bakehouses	109
No. of visits	807
In good condition	102
Below ground	32
With closets in close communication	6
Badly ventilated	25
Badly lighted	12
Drains removed	1
Drains disconnected	2
Closets removed	2
No. dirty and requiring whitewashing	44
Smoke test applied	6
Gullies removed	4

MEAT AND FISH INSPECTOR'S REPORT.

YEAR ENDING 31st DECEMBER, 1894.

Visits to Butchers' Shops	5,300
Visits to Private Slaughterhouses	2,194
Visits to Fish Curing Houses	184

NUMBER OF ANIMALS SLAUGHTERED AT THE PUBLIC SLAUGHTERHOUSES.

Beasts—4839; Sheep—28,767; Calves—1,364; Pigs—4,340.

MEAT AND FISH CONDEMNED AND DESTROYED.

21 carcases of Beef (Tubercular).
38¼ „ (other diseases).
17 Sheep.
10 Calves.
5 Pigs.
1 Deer.
91 Rabbits.
131 boxes of Kippers.
11 barrels Gurnets.
10 boxes „
3 kits „
195 boxes of Herrings.
45 „ Ray.
20 barrels of Ray.
6 kits of Ray.
34 bags Cockles.
129 bags Mussels.
11 boxes Mackerel.
7 „ Cod Fish.

8 boxes Plaice.
2 kits „
2 boxes Pullings.
148 boxes Haddock.
2 „ Hake.
1 „ Soles.
2 „ Halibut.
2 barrels Shrimps.
5 kits Flukes.

WILLIAM HARRISON,

Meat and Fish Inspector.

REPORT OF NUISANCE INSPECTOR.

Health Office,
51, Ainsworth Street,
Blackburn.

To the Medical Officer of Health,

Sir,—The following is the report of the work of my department for the year 1894.

ANALYSIS OF FOOD.

No. of Samples purchased	Name.	No. Submitted for Analysis.	Genuine.	Adulterated
89	Milk ...	60	58	2
	Butter ...	10	9	1
	Lard ...	12	12	
	Pepper ...	3	3	
	Coffee ...	4	4	
		89	86	3

Inhabited Vans.—The dwelling vans that have entered the Borough have been inspected for the purpose of discovering infectious diseases, and noting their sanitary condition. All the occupants were well, and the vans very clean.

Offensive Trades.—The offensive trades during the year have been often visited.

Canal Boats.—I have inspected and reported upon 511 registered canal boats, and 8 canal boats for registration. The number of boats—of which particulars of occupation have been kept—are as follows :—In 511 boats there were met with 640 men and 92 women and 43 children, of whom 32 were under school age. During my inspection I have found seven cases of infringement of the act. No legal proceedings have been taken, as the defects were at once attended to. No infectious disease has been reported or detected. There were 12 boats registered during the year 1894, including 4 cases of re-registration, rendered necessary on account of structural alterations and change of owners. The number of boats registered is 119. No objection has been made at any time to any inspection.

Disinfection.—The work of disinfection has been much about the same as last year.

4 Schools,
331 Dwelling-houses,
389 Beds,
319 Quilts,
476 Bolsters,
384 Pillows,
215 Pairs of Mattresses,
317 Sheets,
91 Suits of Clothes,
36 Carpets,
4 Rugs,
8 Pairs of Curtains,
198 Blankets.
513 Sundry Articles

have undergone disinfection.

Infected articles destroyed at owners request, viz. :—

14 Beds,
27 Pairs of Mattresses,
13 Sundry articles.

Lodging Houses.—The Lodging Houses have been frequently visited during the year. The number at present on the register is—52, accommodating 1,056 adults and 93 children.

During the year—

One house has been registered.

Two houses were refused registration, the premises being unfit.

Eight houses were re-registered owing to change of keeper.

Four honses have had the number of lodgers varied.

Smoke Observations.—177 smoke observations were taken of which 16 exceeded the limit of seven minutes.

Complaints.—355 complaints of various kinds have been reported, and the defects remedied. The number of complaints last year were 226, and in the year 1892 the number was 416.

I have obtained from your Health Sub-Committee 514 orders for the suppression of nuisances under the Public Health Act.

The following is a tabulated account of work carried out by the Assistant Inspectors during the year which I have superintended : —

DESCRIPTION OF VISITS.

Districts—1	2	3
Total Visits..... 10302	12289	13375
Visits to Common Lodging-houses.. 2710	4092	5782
Visits to Common Yards, Back Roads, Passages, &c..... 1682	2873	3022
Dwelling-houses Inspected 1253	1108	1318
Visits to Infected Houses..... 478	494	386
„ Horse Manure Middens... 686	771	690
„ Nuisances complained of.. 179	201	60
„ Cowsheds and Dairies..... 36	38	57
„ Work in progress..... 1016	944	1926
„ Slaughterhouses 11	...	11
„ Offensive Trades 681	...	...
Number of Chimneys Timed..... 47	60	70

DESCRIPTION OF NOTICES SENT OUT AND NUISANCES REMEDIED.

	District—1	2	3
Public Health Act Notices sent out	140	104	135
Preliminary Notices sent out	461	378	378
Notices sent to Day and Sunday Schools.....495	...	...	...
„ „ Library and School Board ...197	...	...	...
Water Closets and Drains Opened & Repaired...	80	108	60
„ Supply Pipes Repaired.....	40	13	19
Ashpits Repaired	8	11	7
Dwelling-houses Whitewashed.....	188	80	65
Slopstone Pipes, Downspouts, and Easing Troughs Repaired	197	104	64
Roofs Repaired	25	59	17
Slopstone Pipes disconnected from sewer	45	67	68
Dirty premises, cellar areas, & closets cleansed...	74	23	20
Poultry removed from premises	14	1	8
Ventilation of bedrooms improved	107	82	30
Soil Pipes repaired and ventilated	2	...	4
Ash tubs provided and repaired	43	46	14
Pavement around gullies repaired	76	42	25
Chimneys raised	2	1	5
Accumulations of refuse removed	18	13	22
Yards flagged and repaired	54	54	30
Public Urinals made private	1	1	2
Defective drain traps replaced	1	15	6
Walls, ceilings, &c., repaired	59	69	30
Cellars flagged	10	5	2
Street Gullies reported to Scavenging Supt.	23	25	15
Ashpits and Tubs	62	137	73
House Drains tested	114	122	164
Trapped gullies provided for slopstones	17	...	...
Covers for cellar areas provided	...	2	3
Doors for ashpits provided	...	8	...
Overcrowding Remedied	1	5	3
Horse manure middens emptied	431	489	660
House walls pointed	25	...	...

WORK REPORTED TO AND VISITED BY THE HEALTH COMMITTEE.

Districts—	1	2	3
Back roads badly paved & unpaved	2	...	11
Workshop over privies	...	...	2
Privies untrapped or close to dwings	36	28	43
Yards badly flagged and unflagged	49	2	25
Passages not flagged or paved	1	...	15
Back to back houses	35	30	43
Houses unfit for habitation	50	8	19
Obstructive dwellings	...	...	6
Dilapidated property	4	25	19
Offensive cesspool and urinals	...	1	2
Insufficient closet accommodation	6	32	4
Yards entirely covered over	1	...	1
Offensive manure midden & stables	5	8	...
Polluted well	...	1	...
Defective drainage.....	18	4	5

Disinfection and Collection of Infected Matter.

Houses fumigated	105	100	126
Houses from which bedding and clothes have been removed	74	83	83
Distribution of disinfectants	151	318	242
Distribution and collection of sanitary pails	1000	760	811

MAGISTERIAL PROCEEDINGS.

Under the Food and Drugs Act three summonses were taken out. One for selling adulterated butter was withdrawn. The other two were for selling adulterated milk and resulted in a penalty of 20/- and costs.

Five lodging-house keepers were proceeded against for breach of the lodging-house bye-laws. One case was withdrawn on payment of costs. The keepers in the other cases were each fined 10/- and cost.

Two summonses were taken out for causing a nuisance from the emission of black smoke. In one case a fine of 20/- and costs was imposed, and in the other a fine of 10/- and costs. In both cases an order was made for the nuisance to be abated within two months.

Three other persons were summoned for minor nuisances. They were ordered to pay cost and to abate the nuisance within seven days.

A butcher was prosecuted for having diseased meat in preparation for sale. He was fined 20/- and costs.

An employer was prosecuted and fined 10s. and costs for allowing his workshop to be overcrowded.

I am, Sir,

Yours obediently,

A. J. SOSBE.

APPENDIX B.

Deaths and Death Rates in Enumeration Districts, January 1st to December 31st, 1894.

District	Population	Deaths from								Death Rate 1894	Death Rate 1889 to 1894
		Scarlet Fever	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
1	615	...	...	...	1	1	7	14	23	37·4	31 1
2	696	...	...	1	...	1	2	4	8	11·4	24·4
3	1009	...	...	...	...	2	3	20	25	24·7	36·8
4	901	...	...	...	..	1	3	5	9	9·9	26·2
5	635	...	...	1	...	1	2	8	12	18·9	33·8
6	1101	...	1	1	1	1	4	10	18	16·3	21·3
7	1230	...	...	...	1	1	4	24	30	24·3	31·2
8	1040	...	...	...	1	2	4	17	24	23 0	24·8
9	883	...	...	...	2	1	1	8	12	13·5	20·7
10	955	...	...	3	1	1	5	6	16	16·7	23·2
11	1113	...		1	...	1	9	18	29	26·0	37·6
12	1349	...	...	...	2	1	4	15	22	16·3	27·3
13	794	...	...	1	...	...	5	7	13	16·3	19·1
14	953	...	1	...	2	1	1	8	13	13·6	14 8
15	899	...	...	...	...	...	4	11	15	16·6	22·4
16	1219	...	...	...	2	3	4	19	28	22·9	26·3
17	972	...	...	1	...	...	2	6	9	9·2	26·7
18	1238	...	...	1	1	3	6	11	22	17·7	24·0
19	1398	...	1	2	3	...	5	11	22	15·8	22·5
20	944	...	...	...	2	...	2	9	13	13·7	28·2
21	1102	...	...	1	1	...	5	10	17	15·4	24·0

APPENDIX A.

Deaths Registered and causes thereof, in the County Borough of Blackburn, during the year 1894, from January 1st to December 31st, inclusive.

Population,—estimated to middle of year, 125,797.

CAUSE OF DEATH.—CLASSES.	SEX TOTAL. Males.	SEX TOTAL. Females.	0 to 1 M.	0 to 1 F.	1 to 5 M.	1 to 5 F.	5 to 10 M.	5 to 10 F.	10 to 15 M.	10 to 15 F.	15 to 20 M.	15 to 20 F.	20 to 25 M.	20 to 25 F.	25 to 35 M.	25 to 35 F.	35 to 45 M.	35 to 45 F.	45 to 55 M.	45 to 55 F.	55 to 60 M.	55 to 60 F.	60 to 65 M.	60 to 65 F.	65 to 75 M.	65 to 75 F.	75 and Upwards M.	75 and Upwards F.	Total under 5 Years M.	Total under 5 Years F.	TOTAL.
I. Specific Febrile or Zymotic Diseases	268	233	78	64	53	52	18	8	6	12	10	8	11	11	28	25	23	22	23	16	4	4	6	4	5	7	3	...	131	116	501
II. Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
III. Dietic Diseases	13	13	10	11	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	1	1	...	...	...	...	...	10	11	26
IV. Constitutional Diseases	35	52	5	3	2	...	...	...	1	1	1	1	...	3	1	2	3	8	6	11	5	7	2	8	4	6	5	2	7	3	87
V. Developmental Diseases	85	80	55	32	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	15	24	13	22	55	33	165
VI. Local Diseases	600	586	160	104	82	67	9	10	8	9	17	13	11	21	25	37	52	43	70	75	36	44	37	55	67	79	26	29	242	171	1186
VII. Deaths from Violence	40	24	5	1	1	4	5	2	2	2	2	1	...	...	5	2	8	2	5	1	2	1	...	2	3	4	2	2	6	5	64
VIII. Ill-defined and not specified causes	77	67	48	33	4	5	...	3	1	...	2	...	...	...	3	1	3	6	2	4	4	9	4	3	4	1	2	2	52	38	144
TOTALS	1118	1055	361	248	142	129	32	23	18	24	32	23	22	35	62	68	90	81	107	107	51	66	52	73	98	121	51	57	503	377	2173
I.—Specific Febrile or Zymotic Diseases.																															
1.—Miasmatic Diseases.																															
Small Pox: Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Small Pox: Unvaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Small Pox: No Statement	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	9	4	2	2	7	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	4	13
Scarlet Fever	4	6	...	...	3	4	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4	10
Typhus	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Whooping Cough	16	27	10	15	5	11	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	26	43
Diptheria	4	10	...	...	3	8	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	8	14
Croupe	13	7	3	...	9	6	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	6	20
Simple continued or ill-defined Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric or Typhoid Fever	17	15	...	...	2	1	2	...	2	5	3	2	1	2	4	4	2	...	1	1	...	...	...	...	...	...	...	...	2	1	32
Tuberculosis.																															
(a) General Tuberculosis	20	10	7	4	3	3	3	...	...	1	3	1	1	...	2	1	...	...	1	...	...	...	...	...	...	...	...	...	10	7	30
(b) Phthisis	81	67	...	3	3	2	4	...	1	4	3	5	9	6	20	16	16	19	19	8	2	3	2	1	2	...	...	...	3	5	148
(c) Abdominal Tuberculosis	16	24	9	13	3	7	2	2	...	1	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	12	20	40
(d) Tubercular Meningitis Acute Hydrocephalus	15	10	3	6	7	2	2	1	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	8	25
(e) Other forms of Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	14	6	...	...	...	...	1	...	...	...	...	...	...	...	1	...	4	1	1	2	2	...	2	1	1	2	2	...	...	...	20
Other Miasmatic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2.—Diarrhœal Diseases.																															
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa Dysentery	54	34	40	18	8	5	...	...	...	...	...	...	...	...	1	...	1	1	...	2	...	1	1	2	2	5	1	...	48	23	88
3.—Malarial Diseases.																															
Remittent Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ague	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
4.—Zoogenous Diseases.																															
Cow Pox and effects of Vaccination	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases (e.g. Hydrophobia, Glanders, and Splenic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5.—Venereal Diseases.																															
Syphilis	4	4	4	2	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	4	3	8
Gonnorrhœ Stricture of Urethra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6.—Septic Diseases.																															
Erysipelas	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Pyæmea Septicæmia	1	4	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	1	5
Puerperal Fever	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2
TOTALS	268	233	78	64	53	52	18	8	6	12	10	8	11	11	28	25	23	22	23	16	4	4	6	4	5	7	3	...	131	116	501
II.—Parasitic Diseases.																															
Thrush and other Vegetable Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Worms, Hydatids, and other Animal Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
III.—Dietic Diseases.																															
Want of Breast Milk	10	11	10	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	11	21
Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chronic Alcoholism	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	1	...	...	...	...	...	...	...	4
Delirium Tremens	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
TOTALS	13	13	10	11	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	1	1	...	...	...	...	...	10	11	26
IV.—Constitutional Diseases.																															
Rheumatic Fever, Rheumatism of the Heart	...	3	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	3
Rheumatism	1	8	...	...	...	...	...	...	1	1	...	...	...	2	...	1	...	1	...	1	...	2	...	...	...	...	...	...	...	...	9
Gout	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cancer, Malignant Disease	23	34	...	...	1	...	...	...	...	...	1	...	...	...	1	...	1	6	5	10	5	3	2	8	3	5	4	2	1	...	57
Purpura, Hœmorrhagic Diathesis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia Chlorosis Leucocythæmia	9	7	5	3	1	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	1	...	...	1	1	1	...	6	3	16
Glycosuria, Diabetes Mellitus	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Other Constitutional Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	35	52	5	3	2	...	...	...	1	1	1	1	...	3	1	2	3	8	6	11	5	7	2	8	4	6	5	2	7	3	87
V.—Developmental.																															
Premature Birth	54	27	54	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	54	27	81
Atelectasis	1	4	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	5
Congenital Malformations	...	2	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Old Age	30	47	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	15	24	13	22	...	...	77
TOTALS	85	80	55	32	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	15	24	13	22	55	33	165
VI.—Local Diseases.																															
1.—Diseases of the Nervous System.																															
Inflamation of the Brain or Membranes	42	28	13	8	15	8	2	3	...	1	2	...	2	...	1	...	4	3	2	2	...	...	1	2	...	...	...	1	28	16	70
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	30	61	...	...	...	...	...	...	...	...	...	3	1	...	...	3	4	2	2	15	5	8	4	8	10	16	4	6	...	...	91
Insanity, General Paralysis of the Insane	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy	7	4	...	...	...	...	...	...	1	...	1	1	...	...	1	1	1	1	2	...	1	...	...	1	...	...	...	...	...	...	11
Convulsions	53	32	44	24	8	8	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	52	32	85
Laryngismus Stridulus (Spasm of Glottis)	2	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
Disease of Spinal Cord, Paraplegia Paralysis Agitans	10	14	1	1	1	1	...	...	...	...	...	...	...	...	...	...	1	...	2	4	1	3	...	...	4	4	...	1	2	2	24
Other Diseases of Nervous System	2	11	...	...	...	...	...	...	...	1	...	...	1	...	...	1	1	1	...	3	...	2	...	1	...	...	...	2	...	...	13
2.—Diseases of Organs of Special Sense (e.g. of Ear, Eye, Nose)	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
3.—Diseases of the Circulatory System.																															
Pericarditis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Endocarditis	2	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	3
Valvular Diseases of Heart	5	8	...	...	...	...	...	...	...	1	1	...	...	...	...	1	2	1	1	1	...	...	1	2	...	2	...	...	...	...	13
Other Diseases of Heart	51	66	2	...	1	1	...	1	...	3	1	4	...	3	4	6	2	6	19	9	5	7	9	11	8	14	...	1	3	1	117
Aneurism	5	3	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	2	...	...	2	...	...	...	...	1	...	8
Embolism Thromboses	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Other Diseases of Blood Vessels	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2
4.—Diseases of Respiratory System.																															
Laryngitis	4	3	1	...	2	3	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	7
Emphysema, Asthma	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Bronchitis	119	126	35	27	19	15	...	1	...	1	...	...	...	1	1	4	4	1	13	14	9	8	10	13	17	29	11	12	54	42	245
Pneumonia	143	91	23	17	31	21	3	1	1	1	9	1	2	7	11	6	22	9	10	8	6	7	4	4	16	4	5	5	54	38	234
Pleurisy	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	1	1	...	...	...	...	5
Other Diseases of Respiratory System	1	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
5.—Diseases of Digestive System.																															
Dentition	5	10	5	6	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	10	15
Sore Throat, Quinsy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Stomach	8	11	2	2	1	...	1	...	...	...	1	1	...	1	...	1	...	...	1	2	1	1	...	2	1	1	...	...	3	2	19
Enteritis	26	17	19	14	2	1	...	...	1	...	...	...	...	...	...	...	1	...	1	...	1	...	1	...	...	2	...	...	21	15	43
Obstructive Diseases of Intestine	6	6	...	...	...	...	...	...	...	...	...	...	...	1	2	...	1	...	1	2	...	1	...	...	1	2	1	...	...	...	12
Peritonitis	20	19	7	4	1	2	1	1	2	...	2	1	1	3	1	4	1	...	1	3	...	...	2	1	1	...	...	...	8	6	39
Ascites	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	16	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	4	3	4	1	3	4	2	1	1	...	...	...	29
Jaundice and other Diseases of Liver	3	4	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	2	1	...	...	...	...	...	1	1	7
Other Diseases of Digestive System	6	3	1	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	1	2	...	...	...	...	1	...	...	1	1	...	9
6.—Diseases of Lymphatic System (e.g. of Lymphatics and Spleen)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7.—Diseases of Gland-like Organs of Uncertain Use (e.g. Bronchocele, Addison's Disease)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8.—Diseases of Urinary System.																															
Acute Nephritis	5	4	1	...	...	...	1	1	...	...	...	...	...	...	1	...	1	1	1	...	...	...	...	1	...	...	...	1	1	...	9
Bright's Diseases, Albuminuria	17	15	1	...	1	...	...	...	1	1	...	...	1	1	...	2	3	2	4	1	1	3	...	2	3	3	2	...	2	...	32
Disease of Bladder or of Prostate	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Diseases of the Urinary System	3	5	1	...	...	...	...	...	1	...	...	...	...	...	...	2	...	1	...	2	...	...	1	...	...	...	...	...	1	...	8
9.—Diseases of Reproductive System.																															
(a) Organs of Generation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Male Organs	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Female Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Of Parturition	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abortion Miscarriage	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Placenta Prævia Flooding	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Accidents of Childbirth	...	17	...	...	...	...	...	...	...	...	...	1	...	4	...	5	...	7	...	...	...	...	...	...	...	...	...	...	...	...	17
10.—Diseases of Joints and Bones.																															
Caries Necrosis	2	2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	4
Arthritis, Ostitis, Periostitis	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Other Diseases of Joints and Bones	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2
11.—Diseases of Integumentary System.																															
Carbuncle Cellulitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Integumentary System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	600	586	160	104	82	67	9	10	8	9	17	13	11	21	25	37	52	43	70	75	36	44	37	55	67	79	26	29	242	171	1186
VII.—Deaths from Violence.																															
1.—Accident or Negligence.																															
Fractures and Contusions	16	11	...	...	...	1	1	1	1	1	1	...	...	...	4	...	3	...	3	...	2	1	...	2	1	3	...	2	...	1	27
Gunshot Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cut, Stab	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Burn, Scald	5	7	1	...	1	3	1	1	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	2	3	12
Poison	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Drowning	3	1	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	4
Suffocation	4	1	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	5
Otherwise	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
2.—Homicide.																															
Manslaughter	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Murder	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
3.—Suicide.																															
Gunshot Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cut, Stab	3	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Poison	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drowning	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2
Hanging	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	2	...	1	...	...	...	6
Otherwise	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4.—Execution.																															
Hanging	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	40	24	5	1	1	4	5	2	2	2	2	1	...	...	5	2	8	2	5	1	2	1	...	2	3	4	2	2	6	5	64
VIII.—Deaths from Ill-defined and not Specified Causes.																															
Dropsy	1	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	1	4
Debility Atrophy Inanition	34	24	32	20	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	34	21	58
Mortification	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tumour	2	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3
Abscess	1	5	...	2	...	2	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	6
Hæmorrhage	3	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	2	...	2	...	...	1	...	...	...	8
Other Ill-defined Causes	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
Causes unspecified, Inquest	9	7	2	1	...	...	...	...	...	...	1	...	...	...	2	...	1	3	1	1	1	2	1	...	...	...	...	...	2	1	16
do. do. no Inquest	26	21	13	10	2	1	...	2	1	...	...	...	...	...	...	...	1	1	...	3	1	2	3	1	4	...	1	1	15	11	47
TOTALS	77	67	48	33	4	5	...	3	1	...	2	...	...	...	3	1	3	6	2	4	4	9	4	3	4	1	2	2	52	38	144

BIRTHS	M.	F.
Legitimate	1727	1733
Illegitimate	78	83
TOTALS	1805	1816
	3621	

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts, January 1st to December 31st, 1894.

District	Population	Deaths from								Death Rate 1894	Death Rate 1889 to 1894
		Scarlet Fever	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
22	788	...	...	...	1	1	2	4	8	10·1	20 7
23	688	...	...	...	1	...	...	7	8	11·7	19·1
24	1265	...	2	...	4	3	4	12	25	19·7	22·9
25	1431	...	...	1	...	1	7	12	21	14·6	30·4
26	930	...	...	1	2	2	3	7	15	16·1	22·7
27	2010	...	1	1	1	1	12	16	32	15·9	19·1
28	1333	...	1	...	1	...	4	17	27	20·2	14·1
29	589	...	...	...	..	...	2	5	7	11·8	18·9
30	899	...	1	...	...	2	6	12	21	23·3	24·4
31	1364	...	...	2	...	2	6	15	25	18·3	22·8
32	1349	...	...	...	...	3	3	10	16	11·8	16·5
33	714	...	1	...	...	...	2	10	13	18·2	24·2
34	969	...	...	...	...	1	3	16	20	20·6	19·0
35	549	...	...	...	1	1	4	3	9	16·3	17·6
36	1164	...	...	...	...	2	3	10	15	12·8	17·1
37	1053	...	...	2	4	1	5	10	22	20·8	22·0
38	1320	...	...	...	1	4	11	12	28	21·2	19·4
39	1081	...	1	...	1	...	4	8	14	12·9	25·0
40	931	...	1	1	1	3	5	16	27	29·0	25·5
41	693	...	1	...	...	1	5	12	19	27·4	26·6
42	1082	...	1	1	...	1	7	13	23	21·2	26·6

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts, January 1st to December 31st, 1894.

District	Population	Deaths from								Death Rate 1894	Death Rate 1889 to 1894
		Scarlet Fever	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
43	1386	...	1	2	3	5	14	18	43	31·0	31 2
44	511	...	...	...	2	1	1	8	12	23·4	24·5
45	695	...	...	...	...	2	5	4	11	15·8	27·5
46	715	...	...	2	1	2	5	15	25	34·9	44·0
47	693	...	...	...	1	3	4	14	22	31·7	37·5
48	1144	1	1	2	1	6	3	7	21	18·3	24·4
49	1108	1	...	1	2	2	1	13	20	22·0	22·3
50	1025	...	...	...	...	...	2	15	17	16·5	22·2
51	1152	...	...	4	1	1	10	21	37	32 1	27·3
52	1332	...	...	4	...	1	1	7	13	11·3	23·1
53	1025	...	...	...	...	...	4	11	15	14·6	18·5
54	1116	...	...	1	2	2	5	9	19	17·0	17·4
55	1217	...	...	3	1	2	1	9	16	13·1	23·1
56	1095	..	...	1	2	1	4	15	23	21·0	30·4
57	1581	...	3	1	1	4	10	26	45	28·4	18·3
58	766	...	...	2	...	...	6	11	19	24·7	32·8
59	1056	...	...	2	1	1	5	11	20	18·9	25·4
60	956	...	...	3	3	3	6	8	23	24·0	31·5
61	1500	...	...	...	...	1	3	11	15	10·0	21·2
62	805	...	...	1	2	2	9	9	23	28·5	26·0
63	946	1	...	2	..	...	4	12	19	20·0	28·3

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts, January 1st to December 31st, 1894.

District	Population	Deaths from								Death Rate 1894	Death Rate 1889 to 1894
		Scarlet Fever	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
64	794	...	...	...	...	3	4	8	15	18·8	17·2
65	724	..	...	1	...	2	5	12	20	27·6	30·3
66	1278	...	...	2	...	4	10	16	32	25 0	34·1
67	1306	...	1	...	1	2	5	16	25	19·1	22·8
68	1595	...	...	...	...	2	4	21	27	16·8	24·4
69	1302	...	...	...	...	...	1	4	5	3·8	15·1
70	1678	...	1	2	5	1	5	18	32	19·0	27·2
71	1603	..	...	...	...	3	3	15	21	13·1	22·6
72	955	...	...	...	3	1	...	8	12	12·5	15·7
73	907	...	1	3	1	...	4	8	17	18·7	26·2
74	596	...	...	1	...	...	10	14	25	41·9	35·5
75	1023	...	...	1	1	1	4	5	12	11·7	15·8
76	901	...	...	1	1	1	4	12	19	21·8	26·0
77	913	1	...	...	...	1	4	14	20	21·9	17·5
78	609	...	...	1	1	1	6	9	18	29·5	42·7
79	955	...	...	...	...	3	2	10	15	15·7	26·1
80	830	...	1	...	...	3	3	16	23	27·7	24·4
81	1222	...	1	...	1	1	3	9	15	12·2	12·5
82	1063	...	..	1	...	...	8	15	24	22·5	25·1
83	1088	...	...	...	2	2	3	14	22	20·2	20·6
84	986	2	...	2	1	1	2	16	24	24·3	20·1

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts, January 1st to December 31st, 1894.

District	Population	Deaths from								Death Rate 1894	Death Rate 1889 to 1894
		Scarlet Fever	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
85	1203	...	...	...	...	2	1	11	15	12·4	18·8
86	693	...	...	1	1	1	5	9	17	24·5	27·8
87	1019	1	...	1	1	2	4	4	13	12·7	15·4
88	1104	...	...	...	...	...	3	8	11	9·9	9·0
89	949	...	..	1	...	1	5	10	17	17·7	22·6
90	1163	...	...	2	1	...	5	7	15	12·8	19·2
91	1074	...	...	2	...	2	4	13	21	19·5	17·3
92	1432	...	...	3	1	...	2	15	21	14·6	23·6
93	1276	...	1	...	2	...	3	8	14	10·9	14·2
94	1195	...	...	...	...	...	3	4	7	5·1	8·7
95	781	...	...	...	...	2	4	10	16	20·4	24·1
96	764	...	...	...	2	...	1	7	10	13·0	17·4
97	1203	...	1	...	3	1	3	11	19	15·7	13·9
98	924	...	...	...	2	1	3	8	14	15·1	10·8
99	931	...	...	...	...	...	2	9	11	11·8	14·3
100	514	...	...	...	...	...	1	8	9	17·5	24·3
101	539	...	...	...	...	...	3	8	11	20·4	20·1
102	651	...	...	...	...	...	3	9	12	18·4	17·1
103	1233	...	...	...	...	1	3	19	23	18·6	21·7
104	1455	...	...	3	3	1	7	25	39	26·8	24·4
105	1235	...	...	...	2	2	4	18	26	21·0	24·1

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts, January 1st to December 31st, 1894.

District	Population	Deaths from								Death Rate 1894	Death Rate 1889 to 1894
		Scarlet Fever	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
106	1101	...	...	1	...	1	...	11	13	11·8	17·1
107	1500	1	...	1	...	2	2	8	14	9·3	16·5
108	1650	...	1	2	3	1	5	21	33	20·0	20·1
109	1758	...	4	1	1	3	10	21	40	22·7	19·2
110	1237	...	1	...	4	...	7	14	26	21·0	19·4
111	1202	...	...	1	3	3	4	10	21	17·7	24·1
112	1365	...	...	...	...	1	8	13	22	16·1	17·3
113	796	...	1	...	2	...	2	6	11	13·8	12·5

The position of the districts are shown on the first map.

APPENDIX C.

BOROUGH, 1894.	Card Room Hands	Spinners	Spinning and Card Masters	Weavers M.	Weavers F.	Winders, Warpers, Tapers, Loomers, and Drawers	Overlookers	Cotton Warehouse		Paper Makers	Factory Hands (not Paper nor Cotton)	Engine Tenters	Coal Miners	Bricklayers' Labourers	Labourers in Cotton Mills	Labourers	Carters, Draymen, and Cabmen	Grooms and Horse-keepers	Foundrymen	Butchers
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	COTTON.																			
Zymotic Diseases																				
Under 1	4	5	1	21	...	4	2	3	...	...	2	3	1	2	1	12	7	...	10	1
1 ,, 5	...	6	...	18	...	8	2	...	...	...	1	2	...	...	...	7	3	...	6	...
5 ,, 15	...	1	...	3	1	2	...	1	...	...	1	1	...	...	...	2	1	...	1	...
15 ,, 25	...	...	...	...	4	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...
25 ,, 35	...	...	...	2	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...
35 ,, 45	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
45 ,, 55	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...
Totals	4	12	1	46	6	16	4	5	...	...	8	7	1	2	1	23	12	...	19	1
Cancer.																				
Under 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
5 ,, 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
35 ,, 45	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
45 ,, 55	1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...
55 ,, 65	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...
Totals	1	...	...	2	2	...	1	...	...	...	1	...	...	...	1	6	2	...	...	1
Nervous Diseases other than Convulsions.																				
Under 1	...	1	...	7	...	1	1	...	...	...	2	1	...	...	...	6	1	...	1	1
1 ,, 5	1	1	...	5	...	...	2	...	...	...	2	...	2	...	...	2	...	...	4	1
5 ,, 15	...	1	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...
15 ,, 25	...	2	...	4	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	1	...
35 ,, 45	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	1	1	...	2	...
45 ,, 55	...	1	...	2	1	3	...	...	...	...	...	...	...	...	...	1	...	1	3	...
55 ,, 65	...	...	...	1	1	1	2	...	...	...	1	...	...	...	...	1	...	...	3	...
65 and upwards	1	1	...	4	...	2	...	1	...	...	...	...	...	...	...	4	...	1	...	1
Totals	2	7	...	25	5	9	6	1	...	...	7	1	2	...	...	16	2	2	15	3
Tubercular Diseases.																				
Under 1	...	5	...	11	...	3	...	...	...	...	2	2	1	1	...	3	2	...	4	1
1 ,, 5	1	4	...	2	...	1	1	...	...	...	1	1	...	1	1	3	...	...	1	...
5 ,, 15	...	...	...	6	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	2	...	...	...	...
25 ,, 35	...	1	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 ,, 45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
45 ,, 55	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
55 ,, 65	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	10	...	21	3	6	1	1	...	...	3	4	1	2	1	8	2	...	5	1
Other Respiratory Diseases.																				
Under 1	4	14	...	24	...	5	3	1	...	...	...	3	1	...	...	10	5	1	6	1
1 ,, 5	1	6	1	17	...	1	3	...	...	1	1	3	...	...	1	12	7	1	10	1
5 ,, 15	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	4	...	...	...	...
15 ,, 25	...	1	...	5	4	1	...	1	...	1	...	...	...	...	...	...	...	...	2	...
25 ,, 35	1	2	...	3	3	1	...	...	...	1	...	1	...	...	1	1	1	...	1	...
35 ,, 45	1	2	...	2	1	5	2	...	...	...	...	2	...	...	...	4	...	2	2	...
45 ,, 55	1	2	...	3	1	...	...	...	...	...	1	2	...	...	...	6	3	...	2	...
55 ,, 65	...	1	...	5	...	1	...	2	...	...	...	...	...	...	...	8	...	...	...	1
65 and upwards	...	2	...	7	1	3	...	...	...	...	1	2	...	...	...	16	2	...	2	...
Totals	8	30	1	67	11	19	8	4	...	3	3	13	1	...	2	61	18	4	25	3
Diseases of Heart and Circulatory System.																				
Under 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
1 ,, 5	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
15 ,, 25	...	...	...	2	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1
25 ,, 35	...	1	...	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
35 ,, 45	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
45 ,, 55	...	1	...	2	...	...	...	...	...	...	1	...	...	...	1	5	...	...	1	...
55 ,, 65	...	...	...	1	...	2	...	...	...	...	...	2	...	...	...	4	...	...	...	...
65 and upwards	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	7	...	...	1	...
Totals	...	3	...	9	4	5	3	...	...	...	1	2	...	...	1	18	...	...	3	1
Diseases of Digestive System.																				
Under 1	...	4	...	12	...	1	1	1	...	...	1	...	1	...	...	10	1	...	3	...
1 ,, 5	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...
5 ,, 15	...	2	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	1	4	3	...	1	...	...	...	...	...	...	...	...	...	...	1	...
25 ,, 35	...	...	...	...	4	2	...	...	...	...	...	...	...	...	...	...	...	...	2	...
35 ,, 45	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...
45 ,, 55	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...
55 ,, 65	...	2	...	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
65 and upwards	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...
Totals	...	12	...	19	9	6	3	3	...	...	1	1	1	...	...	16	2	1	8	...
Diseases of Urinary System.																				
Under 1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...
15 ,, 25	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...
25 ,, 35	1	...	...	...	2	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
35 ,, 45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...
45 ,, 55	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...
65 and upwards	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
Totals	1	2	...	2	2	2	...	...	...	...	...	...	...	...	3	8	2	1	1	...
Premature Birth, Marasmus etc., Teething, Convulsions Under 1	2	18	...	40	...	10	7	2	...	...	2	8	1	...	3	29	7	1	12	...
1 ,, 5	...	2	...	2	...	2	...	...	...	...	1	...	...	...	...	2	2	...	1	1
Totals	2	20	...	42	...	12	7	2	...	...	3	8	1	...	3	31	9	1	13	1
Old Age. Totals	...	2	...	4	1	4	...	...	...	...	...	...	...	...	1	5	...	1	1	...
Violent Deaths.																				
Under 1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...
1 ,, 5	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...
5 ,, 15	...	1	...	1	...	1	1	...	...	...	1	...	...	...	...	3	...	...	2	...
15 ,, 25	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
25 ,, 35	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
35 ,, 45	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
45 ,, 55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...
55 ,, 65	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
65 and upwards	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Totals	...	4	...	4	3	2	1	1	...	...	1	...	...	...	...	13	4	...	2	1
All Others.																				
Under 1	...	7	...	16	...	8	2	1	...	...	2	7	...	1	1	10	1	1	7	2
1 ,, 5	...	...	...	4	...	...	...	...	...	...	1	1	...	1	...	...	...	...	2	...
5 ,, 15	...	...	...	2	1	...	2	...	...	...	...	...	...	...	...	1	1	...	...	...
15 ,, 25	...	1	...	1	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	4	1	...	...	...	...	...	1	1	...	...	...	1	...	...	...
35 ,, 45	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	2	1	...	1	...
45 ,, 55	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...
55 ,, 65	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	3	1	...	...	1
65 and upwards	1	1	...	3	...	1	1	...	...	...	...	...	...	...	1	3	...	...	...	...
Totals	1	11	...	26	15	11	4	1	...	1	4	9	1	2	2	21	5	1	10	3
Phthisis																				
Under 1	...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
1 ,, 5	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
5 ,, 15	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...
15 ,, 25	...	1	...	6	3	3	1	...	...	...	...	...	...	...	...	1	...	1	1	...
25 ,, 35	2	1	...	3	7	8	...	...	...	...	...	...	...	...	...	1	1	...	1	...
35 ,, 45	1	...	...	...	4	3	2	...	...	...	...	...	...	...	...	7	1	...	1	...
45 ,, 55	...	2	...	1	1	1	...	...	...	...	...	...	...	...	...	2	...	...	2	1
55 ,, 65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
65 and upwards	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Totals	3	8	...	11	16	16	4	1	...	...	...	1	...	...	...	14	3	1	7	1
Summary.																				
Under 1	10	58	1	131	...	32	17	8	...	...	12	24	5	4	5	83	25	3	44	6
1 ,, 5	3	21	1	52	1	14	9	...	...	1	6	7	2	2	2	30	13	1	17	4
5 ,, 15	...	5	...	18	5	5	5	2	...	...	4	2	...	...	...	13	3	...	3	...
15 ,, 25	...	6	...	22	25	11	1	4	...	1	1	1	...	...	...	4	1	2	4	1
25 ,, 35	4	5	...	10	25	16	1	...	...	1	...	1	1	...	2	4	5	1	5	...
35 ,, 45	2	4	...	5	11	10	4	...	...	...	1	3	...	...	...	18	5	2	6	1
45 ,, 55	...	10	...	9	5	5	1	...	...	1	2	3	...	...	1	23	5	1	10	1
55 ,, 65	...	4	...	10	3	5	2	3	...	...	3	2	...	...	2	23	2	...	4	2
65 and upwards	2	8	...	21	2	10	3	2	...	...	3	3	...	...	3	42	2	2	6	1
Totals	23	121	2	278	77	108	43	19	...	4	32	46	8	6	15	240	61	12	109	16

BOROUGH, 1894.	Bakers & Confectioners	Shopkeepers	Tailors	Boot and Shoe Makers	Masons and Builders	Carpenters and Joiners	Plumbers and Painters	Hotel Keepers and Publicans	Farmers	Gardeners	Printers and Compositors	Teachers	Clerks	Manufacturers	Professional Men	General Servants	House Wives			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Zymotic Diseases																				
Under 1	...	3	1	1	3	2	2	1	1	...	...	...	3	1	3	...	...	...	...	...
1 ,, 5	3	2	1	...	1	4	4	...	...	...	...	...	3	1	...	2	...	...	...	...
5 ,, 15	1	2	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
15 ,, 25	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...
25 ,, 35	...	1	...	...	1	1	...	1	...	...	...	1	...	...	...	1	1	...	...	...
35 ,, 45	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	3	...	...	...
45 ,, 55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	6	...	...	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	3	...	...	...
65 and upwards	...	...	...	...	...	1	...	...	...	1	...	...	1	...	...	1	6	...	...	...
Totals	4	10	2	1	7	8	6	4	1	1	1	2	9	2	4	4	20	...	...	...
Cancer.																				
Under 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 ,, 45	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...
45 ,, 55	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	6	...	...	...
55 ,, 65	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	14	...	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	8	...	...	...
Totals	...	2	...	...	...	...	1	1	1	...	...	...	2	...	...	...	33	...	...	...
Nervous Diseases other than Convulsions.																				
Under 1	...	...	...	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	3	...	1	1	...	...	...	...	...	2	...	2	...	...	...	...	...
5 ,, 15	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
25 ,, 35	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	1	...	...	...
35 ,, 45	...	2	...	...	...	2	...	1	...	...	...	...	...	...	...	...	6	...	...	...
45 ,, 55	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	18	...	...	...
55 ,, 65	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	26	...	...	...
65 and upwards	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	30	...	...	...
Totals	...	3	...	6	4	8	2	2	...	...	1	...	4	1	2	2	81	...	...	...
Tubercular Diseases.																				
Under 1	...	...	...	...	3	4	...	...	...	1	1	...	1	...	...	1	...	...	...	...
1 ,, 5	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
5 ,, 15	...	1	1	...	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
15 ,, 25	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 ,, 45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
45 ,, 55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	...	3	1	...	4	5	...	1	...	1	1	...	2	...	1	1	...	...	...	...
Other Respiratory Diseases.																				
Under 1	1	6	...	3	5	...	4	4	1	...	...	1	3	...	1	...	...	...	...	...
1 ,, 5	1	4	1	2	2	1	1	...	1	...	...	...	6	...	2	1	...	...	...	...
5 ,, 15	...	3	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
15 ,, 25	...	2	...	...	1	...	1	1	...	...	...	...	1	...	...	...	1	...	...	...
25 ,, 35	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	5	...	...	...
35 ,, 45	...	3	1	...	...	...	...	1	...	...	...	1	...	...	...	1	8	...	...	...
45 ,, 55	...	3	...	...	2	4	1	...	...	...	...	...	1	1	1	1	16	...	...	...
55 ,, 65	...	4	...	...	...	1	...	1	1	...	...	...	1	...	1	2	29	...	...	...
65 and upwards	1	3	...	1	...	2	3	2	2	...	...	...	1	...	2	...	48	...	...	...
Totals	3	28	2	6	10	8	11	9	5	...	1	2	13	1	7	5	107	...	...	...
Diseases of Heart and Circulatory System.																				
Under 1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
15 ,, 25	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	3	...	...	...
35 ,, 45	...	1	...	...	...	...	1	...	...	...	...	...	3	1	...	1	4	...	...	...
45 ,, 55	...	2	...	1	3	2	...	...	...	...	...	...	...	...	1	...	11	...	...	...
55 ,, 65	...	2	...	1	...	2	1	...	...	...	...	...	...	...	...	...	24	...	...	...
65 and upwards	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	17	...	...	...
Totals	2	8	...	4	3	7	2	...	...	...	...	...	6	1	1	1	59	...	...	...
Diseases of Digestive System.																				
Under 1	...	4	1	...	1	1	2	...	...	...	...	...	2	...	1	...	...	...	...	...
1 ,, 5	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
25 ,, 35	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...
35 ,, 45	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...
45 ,, 55	...	1	...	...	1	...	...	1	...	...	...	...	1	...	...	...	7	...	...	...
55 ,, 65	...	2	...	...	...	1	1	...	...	...	...	...	2	...	1	...	7	...	...	...
65 and upwards	...	...	1	1	1	...	...	...	1	...	...	...	...	...	1	...	4	...	...	...
Totals	...	7	2	1	5	3	3	1	1	...	...	...	6	...	3	...	25	...	...	...
Diseases of Urinary System.																				
Under 1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...
25 ,, 35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
35 ,, 45	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	...	...	...
45 ,, 55	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	4	...	...	...
55 ,, 65	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	7	...	...	...
65 and upwards	...	1	...	...	...	1	...	...	...	1	...	...	1	...	...	...	3	...	...	...
Totals	...	2	1	1	2	4	...	1	...	1	...	...	2	1	...	...	20	...	...	...
Premature Birth, Marasmus etc., Teething, Convulsions Under 1	1	11	4	...	6	6	3	1	2	...	...	1	7	...	2	4	...	...	...	...
1 ,, 5	...	2	1	...	--	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	13	5	...	6	7	3	1	2	...	...	1	7	...	2	4	...	...	...	...
Old Age. Totals	...	4	...	...	...	...	1	1	2	1	...	...	...	...	...	3	45	...	...	...
Violent Deaths.																				
Under 1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
35 ,, 45	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	...
45 ,, 55	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
65 and upwards	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...
Totals	...	3	...	1	3	1	1	...	...	...	...	...	1	...	2	...	11	...	...	...
All Others.																				
Under 1	...	4	...	...	8	...	...	1	...	1	...	...	...	...	1	4	...	...	...	...
1 ,, 5	...	1	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...
5 ,, 15	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
15 ,, 25	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
25 ,, 35	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1	8	...	...	...
35 ,, 45	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	2	11	...	...	...
45 ,, 55	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	6	...	...	...
55 ,, 65	...	1	...	...	...	1	1	2	...	...	...	...	...	...	1	...	10	...	...	...
65 and upwards	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	...	...	...
Totals	1	9	...	...	10	1	2	4	...	1	1	...	5	...	2	8	41	...	...	...
Phthisis																				
Under 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
5 ,, 15	...	3	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
15 ,, 25	...	3	...	...	...	...	...	1	...	...	...	...	1	...	...	...	2	...	...	...
25 ,, 35	...	1	...	1	2	...	...	1	...	...	...	1	2	...	...	...	8	...	...	...
35 ,, 45	1	2	...	...	2	1	1	...	...	...	...	...	1	...	...	1	9	...	...	...
45 ,, 55	...	...	...	...	4	2	...	...	...	...	1	3	...	...	...	1	5	...	...	...
55 ,, 65	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
65 and upwards	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	11	...	2	9	5	1	2	...	...	1	4	6	...	...	2	26	...	...	...
Summary.																				
Under 1	2	29	6	6	29	16	12	7	4	2	1	2	16	1	8	9	...	...	...	...
1 ,, 5	4	10	3	6	5	9	7	...	1	...	...	...	15	1	5	3	...	...	...	...
5 ,, 15	1	11	1	2	2	5	...	2	...	...	2	1	2	...	...	...	...	...	...	...
15 ,, 25	1	11	...	1	2	1	1	2	...	...	...	...	3	1	...	1	9	...	...	...
25 ,, 35	...	3	...	1	5	...	2	3	...	...	...	2	5	...	1	3	29	...	...	...
35 ,, 45	2	11	1	1	4	4	2	4	...	...	...	1	6	1	1	4	56	...	...	...
45 ,, 55	...	7	1	...	14	9	2	1	...	...	1	3	4	2	2	4	81	...	...	...
55 ,, 65	...	9	...	2	1	6	3	5	2	...	2	...	5	...	4	2	125	...	...	...
65 and upwards	2	12	1	3	1	7	4	3	5	3	...	...	7	...	3	4	168	...	...	...
Totals	12	103	13	22	63	57	33	27	12	5	6	9	63	6	24	30	468	...	...	...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